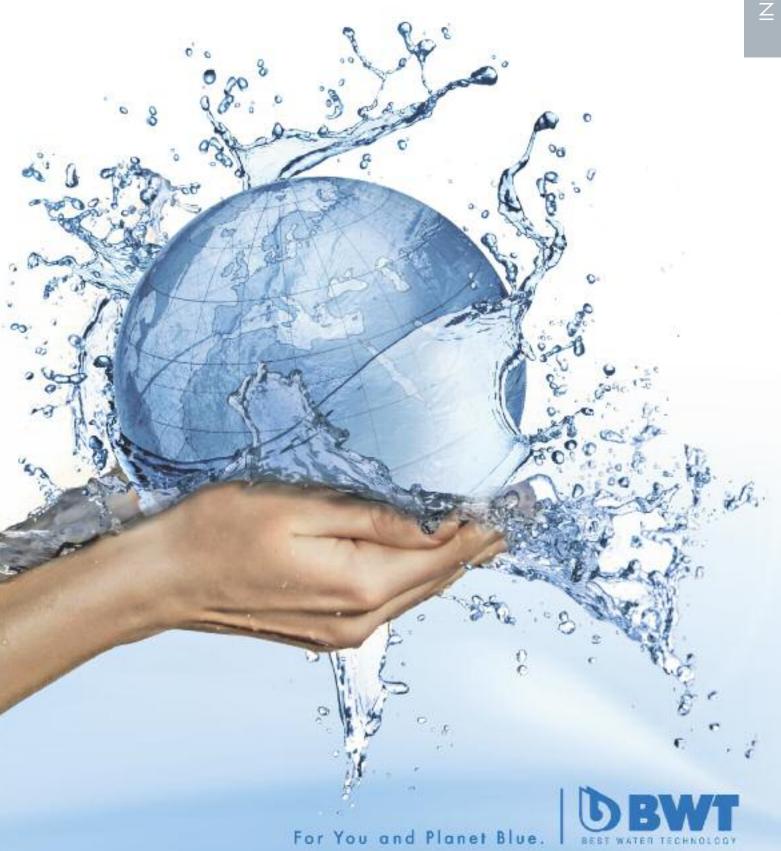


Industry & Commercial Catalogue



BWT PERMO GROUP

The Best Water Technology Group was formed in 1990 and is today Europe's leading water technology company. The goal of our more than 2,800 employees in over 70 subsidiaries and associates is to provide private, industrial, business, hotel and municipal customers with innovative, economical and ecological technologies that deliver maximum safety, hygiene and health in their daily contact with water, the elixir of life.

BWT offers state-of-the-art water treatment technologies and services for drinking water, pharma water, process water, heating water, boiler water, cooling water and water for airconditioning systems as well as swimming pool water. To achieve technological superiority in all areas of water treatment, BWT's innovation centres are continuously researching, developing optimising processes for filtration, filter media, ion exchange systems for demineralisation, softening, decarbonisation, membrane technologies, microfiltration, ultrafiltration, nanofiltration, reverse osmosis, pure steam generators, high-purity water distillation, UV systems, ozone generators, ion exchange membranes, electrolysis systems, electro dialysis, electrode ionisation, chlorine dioxide generators and metering pumps which are used throughout the world to achieve excellent water quality.

Thousands of service employees, plumbers, planners, architects and hy-

giene experts constitute the BWT water partner network. Whether at the entrance of the water pipe into a building (the "Point of Entry") or at the tapping point ("Point of Use"), BWT products "made in Europe" have proved their quality millions of times. Such products include the new table water filters for preparing coffee or tea, filters for optimising water for coffee machines, water filters for baking and steam ovens and vending machines, under-the-sink particle-filters as well

as water dispensers, reverse osmosis and UV devices. BWT also offers compact and innovative products to end consumers for the highest water quality.

With unique high efficiency membranes for fuel cells and batteries, BWT is bringing about a cleaner and sustainable energy supply in the 21st century. Employees in Research & Development work on new processes and materials using state-of-the-art methods to target the development of ecological and at the same time economical products. The reduction of energy consumption of products and the consequent minimisation of CO2 emissions is a key issue for new and further development.

BWT – For You and Planet Blue is our mission to take ecological, economical and social responsibility, to provide our customers and part-

ners with the best products, systems, technologies and services in all areas of water treatment and simultaneously contribute valuably to preserve the global resources of our blue planet.











Our business: water! Our specialty: Water Treatment...

For 90 years, BWTPERMO the European leader of the water treatment at the point of use, has put at the service of private individuals his experience and his know-how, gained with the development of technical solutions, material and products on behalf of the most demanding industrials (pharmaceutical industries, biotechnological, cosmetic, food industry, etc...). BWT as a French designer and manufacturer offers a complete range to solve the water treatment problems in community and industry.

PERMO, it's 13 regional branches and an head office near Paris, on Saint-Denis (93- France) site, gathering the production, the research & development, the laboratory, the export and engineering department.

Water treatment at point of use: softe-ning and antiscale to protect your cir-cuits and processes from scaling; filtration to eliminate particles and micro-organisms that are responsible for many disorders.

Systems for analysis and injection of products to manage and secure your technical installations; a range of reverse osmosis units enabling you to demineralize raw water into high quality water; a large choice of formulation chemicals enabling you to

protect your circuits and deal with all quality water problems.

Permo is the technical and commercial partner of engineering consultants, installers and industrials. Since many years the acquired trust has been supported by the quality of our products and an effective organization dedicated to our customers, thanks to a sales division and an after-sales department of more than 90 echnicians









softening/antiscale	P. 4
Water softener PERMO 5000 Water softener PERMO 6000 Alcyo Water softener PERMO 7000 Alcyo Assembly Kit Water softener PERMO 9000 CC Alcyo Water softener PERMO 8000 CC Alcyo Water softener PERMO EC PERMO Probox Analysis Remote monitoring unit Antiscale AQAtotal	p.7 p.8 p.9 p.10 p.11 p.12 p.13
Filtration	P. 16
PERMO CRISTAL WF Filter PERMO CELSIUS Filter PERMO FLASH Filter PERMO FTPAC Filter SINGLE CARTRIDGE HOUSING High Flow / CMC HOUSING Pretreatment Cartridge Pretreatment and Chlorination Cartridge Polishing Cartridge Polishing Cartridge Permo 1500/2000 Sand filters Permo 2000 Sand filters Permo 2500 Sand filters PERMOFPM / Ecofildeb Filter PERMO FPM CYCLONIC filter PERMO DESILTING pack	p.19p.20p.21p.22p.23p.24p.25p.26p.27p.28p.29p.30p.31p.32
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SOFTENING/ANTISCALE





• Analyseur PERMO Probox Analysis

• Remote monitoring unit

Antiscale AQAtotal



PERMO 5000

The 5000 range meets all the water softening requirements of a small community facility or apartment block: closed circuit, air conditioning, catering etc. It includes:

- Valve with integrated water meter
- Mixing valve integrated

Product type

Туре	5010 Bi-bloc	5016 Bi-bloc	5028 Bi-bloc
Resin volume in liters	10	16	28
Coupling diameter		DN 25/1"	
Exchange capacity, °m3	55	88	154
Flow rate at TH < 0.2°f m3/h	2	2,2	2,3
Autonomy of salt tank, nb of regeneration	75	41	25
Load on ground kg	105	130	150
First salt loading kg	75	75	75
Consignment weight kg	27	34	48
Product code	P0002520	P0002521	P0002522

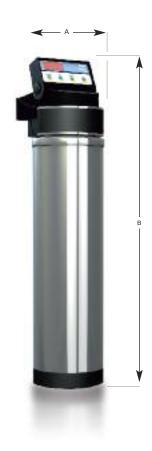
Softener accessories

Accessories	Consignment weight kg	Product code	Delivery days
Water meter DN 25/1"	2,7	P0005325	14
2 Permoflexible kits 1" 800 mm	1	P0010134	14
Salt loss level	1	C0261545	14
Stericlean 1 (2x150 ml)	0,3	P0004880	14
Stericlean 2 (4x11)	4	P0004881	14

Dimensions

Туре	5010	5016	5028
A: Body diameters mm	210	185	210
B : Softener height mm	690	1140	1380
Salt tank diameter mm	530	530	530
Salt tank height mm	680	680	680





PERMO 6000 ALCYO

The Permo Alcyo 6000 meets the needs of small cooking units, ideal for filling low volume closed circuits networks and industrial processes around the clock.

It is made up of:

- Glass fibre-reinforced polyester body
- Noryl control unit
- A5X control box
- NEW: Remote managing system (see p.14)



Product type

Туре	6025	6050	6075
Resin volume in liters	25	50	75
Coupling diameter		DN 32/1"1/4	
Exchange capacity, °m3	140	275	412
Flow rate at TH < 0.2°f m3/h	2,4	2,6	3
Autonomy of salt tank,nbr of regenerations	19	14	11
Load on ground kg	240	300	500
First salt loading kg	100	100	200
Consignment weight kg	52	75	125
Product code	P0002552	P0002555	PK0002519
Delivery days	14		



Softener accessories

Accessories	Consignment weight kg	Product code	Delivery days
PERMOflex kit F/F 1"1/4 stainless steel L:800 mm	2	PK0001107	14
6000 Bypass suppression kit	0,3	P0001286	14
6000 alternation kit (excl. counter)	2,7	P0005716	14
Chloration kit	0,3	P0011506	14
Water meter DN 25/1"	2,7	P0005325	14
PermoCristal Filter DN 32/1"1/4	3,8	P0003198	14
PermoCristal Manual Filter DN 32/1"1/4	5,8	P0010072	14
PermoFlash Automatic Filter DN 32/1"1/4	6	P0010077	14
Mixing valve DN 25/1"	1	P0001920	14
Salt loss level	1	C0261545	14
6000 Plug and Soft assembly kit Right	-	P0001117	14
6000 Plug and Soft assembly kit Left	-	P0001116	14
Stericlean 1 (2x150 ml)	0,3	P0004880	14
Stericlean 2 (4×11)	4	P0004881	14

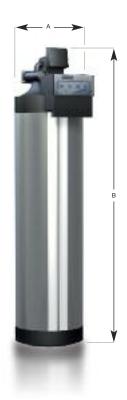


Туре	6025	6050	6075
A: Body diameters mm	210	260	335
B : Softener height mm	1580	1830	1830
Salt tank diameter mm	470	530	720
Salt tank height mm	660	<i>7</i> 80	800









PERMO 7000 ALCYO

The Permo ALCYO 7000 softener prevents the scaling of sanitary, heating $\!\!/$ air conditioning and industrial process installations.

It is made up of:

- Glass fibre-reinforced polyester body
- Noryl control unit
- Rapid dissolution salt tank (to 200 liters)
- A5X control box
- NEW : Remote monitoring system (see p.14)



Product type

Туре	7050	7075	7100	7125	7150	7200
Resin volume in liters	50	75	100	125	150	200
Coupling diameter			DN 40/1	''1/2 fem.		
Exchange capacity, °m3	275	410	550	685	825	1100
Flow rate at TH < 0.2°f m3/h	7	7	7	7	9,5	9
Autonomy of salt tank, nbr of regenerations	19	13	8	6	11	8
Load on ground kg	450	500	500	550	850	950
First salt loading kg	200	200	200	200	300	300
Consignment weight kg	150	180	200	230	275	350
Product code	PK0002765	PK0002767	PK0002768	PK0002770	PK0002771	PK0002772
Delivery days	14					

Softener accessories

Accessories	Consignment weight kg	Product code	Delivery days
Permoflex kit M/F 1''1/2 stainless steel	2	P0001107	14
Bypass suppression kit	2,8	P0001791	14
Alternation kit (excl. counter)	7,5	P0005702	14
Chloration kit to 125 liters	0,2	P0011507	14
PERMO Sanirésine	1	P0029527	14
Water meter DN 40/1"1/2	5	P0005335	14
PermoCristal Filter DN 40/1"1/2	3,8	P0003199	14
PermoCristal Manual Filter DN 40/1"1/2	7	P0010073	14
PermoFlash Automatic Filter DN 40/1"1/2	8,4	P0010078	14
Mixing valve DN 32/1"1/4	1	P0001923	14
Mixing valve DN 50/2"	1	P0001924	14
Salt loss level	1	C0261545	14
7000 Plug and Soft assembly kit Right	Included	P0001119	14
7000 Plug and Soft assembly kit Left	Included	P0001118	14
Stericlean 1 (2x150 ml)	0,3	P0004880	14
Stericlean 2 (4x11)	4	P0004881	14

Dimensions

Туре	7050	7075	7100	7125	7150	7200
A: Body diameters mm	375	375	375	425	460	550
B : Softener height mm	1245	1750	1750	1790	1880	1 <i>7</i> 85
Salt tank diameter mm	720	720	720	720	715	715
Salt tank height mm	800	800	800	800	1400	1400



Softening-BWT PERMO

ASSEMBLY KIT

The PERMO PLUG N'SOFT fitting kits allow easy, fast on-site connection of PERMO 6000 and 7000 Alcyo softeners.

They are supplied prefitted with by-pass valves, soft water sampling cocks, connecting hoses, the water meter (7000 ALCYO version) and the 11/4 " mixing valve. Two kits for each type of softener:

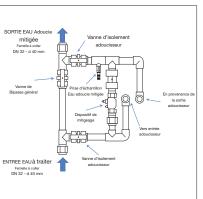
• Left-hand kit for left-hand by-pass

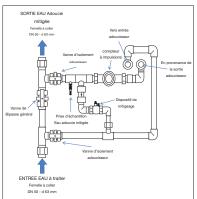
- Right-hand kit for right-hand by-pass

Combining the two kits allows a duplex to be rapidly installed



Туре	Coupling diameter	Consignment weight kg	Product code	Delivery days
6000 Plug N' Soft as-sembly kit Left	DN 32	10	P0001116	14
6000 Plug N' Soft as-sembly kit Right	DN 32	10	P0001117	14
7000 Plug N' Soft as-sembly kit Left	DN 50	20	P0001118	14
7000 Plug N' Soft as-sembly kit Right	DN 50	20	P0001119	14





Plug and Soft Assembly Kit for PERMO softeners

- 2 Assembly kit for each type:
- Left assembly kit for left by-passLeft assembly kit for right by-pass

With 2 kits you can ealisy make a duplex

Dimensions

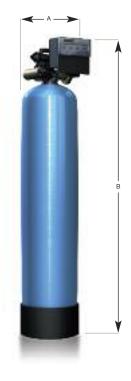
Туре	6000 ALCYO KIT PLUG N' SOFT	7000 ALCYO KIT PLUG N' SOFT
Total outside height mm	730	800
Total outside width mm	615	1270











PERMO 9000 CC ALCYO



The Permo ALCYO 9000 CC treats high flow rates; it meets the needs of large public sector and industrial process installations.

It is made up of:

• By-pass valve included

• Flexible DN50 1 vacuum breaker

• NEW : Remote monitoring box ALCYO (see p.14) Exclusivity: glass fibre-reinforced polyesther body

Product type

Туре	9125 CC	9175 CC	9225 CC	9300 CC	
Resin volume in liters	125	1 <i>7</i> 5	225	300	
Coupling diameter	2"/DN 50				
Exchange capacity, °m3	687	962	1237	1650	
Flow rate at TH <°f m3/h	13	13	13	14	
Autonomy of salt tank,nbr of regenerations	22	15	12	10	
Load on ground kg	650	900	1000	1150	
First salt loading kg	300	300	300	400	
Consignment weight kg	250	300	390	460	
Product code	PK0009210	PK0009211	PK0009212	PK0009213	
Delivery days	21				

Softener accessories

Accessories	Consignment weight kg	Product code	Delivery days
Permoflexible kit M/F 2"	1	P0073390	14
Hydro 2 alternation kit counters (excl. counter)	1,7	P0001921	14
Alternation kit 24 v 1 counter (excl. counter)	2,5	P0001922	14
Water meter DN 50/2"	14	P0005338	14
PermoCristal Manual Filter DN 50/2"	17	P0010074	14
PermoFlash Automatic Filter DN 50/2"	36	P0010079	14
Mixing valve DN 32/1"1/4	1	P0001923	14
Mixing valve DN 50/2"	1	P0001924	14
Salt loss level	1	C0261545	14
Stericlean 1 (2x150 ml)	0,3	P0004880	14
Stericlean 2 (4x1 l)	4	P0004881	14

Dimensions

Туре	9125 CC	9175 CC	9225 CC	9300 CC
A : Body diameters mm	425	460	550	610
B : Softener height mm	1960 1995	2075 2110	1930 1965	2170 2205
Salt tank diameter mm	720	720	720	720
Salt tank height mm	1400	1400	1400	1400



Softening-BWT PERMO

PERMO 8000 CC ALCYO

The Permo ALCYO 8000 CC treats high flow rates; it meets the needs of large public sector and industrial process installations.

It is made up of:

By-pass valve includedFlexible DN50 1 vacuum breaker

NEW : Remote monitoring box ALCYO (see p.14)
 Exclusivity : glass fibre-reinforced polyesther body





Product type

Туре	8150 CC ALCYO	8250 CC ALCYO	8300 CC ALCYO	8400 CC ALCYO	8550 CC ALCYO	8600 CC ALCYO	8700 CC ALCYO	8800 CC ALCYO
Resin volume liters	150	250	300	400	500	600	700	800
Coupling diameter				DN 65	/2″1/2			
Exchange capacity, °m3	825	1375	1650	2200	2750	3300	3850	4400
Flow rate at TH < 0.2°f m3/h	20	25	22	25	23	20	20	20
Autonomy of salt tank nbr of regenerations	13	8	9	7	12	12	8	8
Load on ground T/m²	5	5	5	4	4	4	4	4
First salt loading kg	300	300	300	300	400	400	400	400
Consignment weight T/m ²	0,5	0,55	0,6	0,8	1,05	1,15	1,35	1,65
Product code	PK0002860	PK0002861	PK0002864	PK0002865	PK0008555	PK0008556	PK0008557	PK0008558
Delivery days		21						



Softener accessories

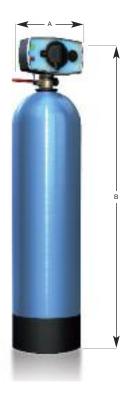
Accessories	Consignment weight kg	Product code	Delivery days
PERMOflexible kit M/F 2"1/2 unitary	1	P0073388	14
Hydro 2 alternation kit counters(excl.counters)	1,7	P0001921	14
24 V alternation kit 1 counter (excl.counter)	2,5	P0001922	14
Water meter DN 50/2"	6,2	P0005338	14
Water meter DN 50 flanges/2"1/2	14	P0005320	35
PERMO Cristal 2" 1/2	2	P0003539	14
PermoCristal Manual Filter DN 65/2"1/2	17	P0033932	35
PermoFlash Automatic Filter DN 65/2"1/2	36	P0033936	14
Mixing valve DN 32/1"1/4	1	P0001923	14
Mixing valve DN 50/2"	1	P0001924	14
PERMO Saniresin	1	P0029527	14
Salt loss level	1	C0261545	14
Stericlean 1 (2x150 ml)	0,3	P0004880	14
Stericlean 2 (4x1 l)	4	P0004881	14

Dimensions

Туре	8150 CC ALCYO	8250 CC ALCYO	8300 CC ALCYO	8400 CC ALCYO	8550 CC ALCYO	8600 CC ALCYO	8700 CC ALCYO	8800 CC ALCYO
A : Body diameters mm	550	610	610	770	930	930	1075	1075
B : Softener height mm	2210	2250	2250	2400	2430	2430	2395	2395
Salt tank diameter mm	720	720	720	820	1300	1300	1300	1300
Salt tank height mm	1400	1400	1400	1400	1500	1500	1500	1500







PERMO HOT WATER

The Permo Hot Water softener range designed for local communities meets the hot water needs of small kitchen units. It resists temperatures up to 65 $^{\circ}{\rm C}$

It is made up of: :

• Glass fibre-reinforced polyester body

Product type

Туре	EC 17	EC 35	EC 50	EC 65	
Resin volume in liters	17	35	50	65	
Coupling diameter	DN 25/1" fem.				
Exchange capacity, °m3	100	200	275	350	
Flow rate at TH < 0.2°f m3/h		2	,7		
Autonomy of salt tank, nbr of regenerations	25	19	14	16	
Load on ground kg	120	160	180	300	
First salt loading kg	75	125	125	200	
Consignment weight kg	27	45	65	79	
Product code	PK0001571	PK0001572	PK0001573	PK0001574	
Delivery days	14				

Softener accessories

Accessories	Consignment weight kg	Product code	Delivery days
PermoCelsius filter 1"	2	P0010064	14
Stericlean 1 (2 x 150 ml)	0.3	P0004880	14
Stericlean 2 (4 x 1 l)	4	P0004881	14

Dimensions

Туре	EC 17	EC 35	EC 50	EC 65
A : Body diameters mm	254	254	257	335
B : Softener height mm	678	1084	1568	1576
Salt tank diameter mm	480	535	535	720
Salt tank height mm	680	775	775	800



Softening-BWT PERMO

PERMO PROBOX ANALYSIS

The PERMO PROBOX TH ANALYSIS enables automatic determination and monitoring of the residual hardness content. The PERMO PROBOX TH CI ANALYSIS displays both the hardness measurement and the chlorine (free and active) measurement. This system is ideal for protection of specific water production systems such as for sterilization, dialysis, industrial processes, steam boilers, etc. The water analysis is done online by colorimetry, with the value displayed. If the setpoint value is exceeded, an alarm is displayed and the PROBOX ANALYSIS allows the installation to be shutdown preventively if needed, through a 4-20 mA output. The setting to be measured and the corresponding measurement range are determined by the choice of indicator and by appropriate programming done by the user.

Product type

Туре	PROBOX ANALYSIS TH	PROBOX ANALYSIS TH/CI	PROBOX ANALYSIS CI libre
Analysis made	Hardness	Hardness/ free chlorine/ active chlorine	free chlorine
Product code	P0080505	P0960187	P0960204
4-20 mA output	Yes	Option	Option
Delivery days		21	

Associated accessories to Probox Analysis

Accessories	Consignment weight kg	Product code	Delivery days
Filting kit PROBOX ANAYSIS TH	1	P0080506	14
Option card 4-20 mA	0,5	P0920161	14
Hardness reagent 0,09 to 0,89 °f 500 ml	0,5	P0959132	14
Hardness reagent 0,45 to 4,48 °f 500 ml	0,5	P0959133	14
Hardness reagent 1,79 to 17,79 °f 500 ml	0,5	P0959134	14
Hardness reagent 4,48 to 44,80°f 500 ml	0,5	P0959759	14
Testomat cooler	1	P0915948	21





REMOTE MONITORING UNIT FOR PERMO WATER SOFTENERS





EXCLUSIVITY

A major innovation in water treatment: ALCYO communication. Whether locally or at a distance, A5X electronics now enable remote monitoring of your PERMO water softeners, together with some associated equipment such as the absence of product in a dosing unit. Please contact your BWT Permo agency for more information.

ALCYO COMMUNICATION SYSTEM FOR PERMO SOFTENERS with A5X electronics	Product code	Delivery days	Notes
In a wall panel ALCYO communication box (modem)	P0024460A	14	Allows 4 A5X units and 4 dry contacts to be connected. This box requires a telephone socket for long-distance communication
ALCYO communication software	P0024461	14	To be installed in a PC for local data analysis.
ALCYO interface board for A5X unit with 4 metre cable.	P0024462	14	Allows the A5X unit to be connected to the communication box. An interface board is required for each A5X unit

AQATOTAL

Physical antiscale treatment with electrolytic pulse controlled system. IQ technology directly influences the water's calcocarbonic balance with electrical pulses whose amplitude, frequency and intensity are constantly adjusted to fit the flow rate and quality of the water.

the flow rate and quality of the water.

The system enables the control of scaling (not on heating surfaces) without changing the chemical constitution of the water in the distribution network. Ideal for service sector accommodation and offices.





Туре	4500	5600	8400	11200	14000
Coupling diameter	DN 40/1"1/2	DN 40/1"1/2	DN 40/1"1/2	DN 50/2"	DN 50/2"
Flow rate with 0.8 bar head loss m3/h	4.5	5.6	8.4	11.2	14
Total treatment capacity,m3	760	1150	1725	2300	2875
Operating weight kg	33	57	64	94	101
Consignment weight kg	39	63	70	104	111
Product code	P0005904	P0005905	P0005908	P0005911	P0005914
Delivery days	35				



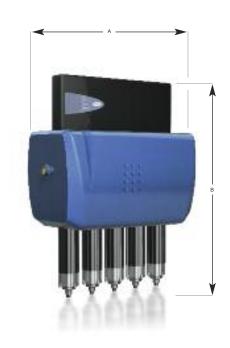
Associated accessories to antiscale

Accessories	Consignment weight kg	Product code	Delivery days
PermoCristal Filter DN 40/1"1/2	4.8	P0003199	14
PermoCristal Manual Filter DN 40/1"1/2	7	P0010073	14
PermoFlash Automatic Filter DN 40/1"1/2	8.5	P0010078	14
PermoCristal Filter DN 50/2"	5	P0003200	14
PermoCristal Manual Filter DN 50/2"	7	P0010074	14
PermoFlash Automatic Filter DN 50/2"	36	P0010079	14

Dimensions

Туре	4500	5600	8400	11200	14000
Coupling diameter	1"1/2 DN 40	1"1/2 DN 40	1"1/2 DN 40	2" DN 50	2" DN 50
A : Height mm	320	560	560	825	825
B : Width mm	1105	1280	1280	1280	1280
Depth mm	320	470	470	470	470





FILTRATION





- PERMO CELSIUS FILTER
- PERMO FLASH FILTER
- PERMO FTPAC FILTERS
- SINGLE CARTRIDGE HOUSING
- High Flow / CMC HOUSING
- Pretreatment Cartridges
- Pretreatment and Chlorination Cartridges
- Polishing Cartridges
- Permo 1500/2000 Sand filters
- PERMO 2000 Sand filters
- PERMO 2500 Sand filters
- PERMOFPM / Ecofildeb Filter
- PERMO FPM CYCLONIC filter
- PERMO DESILTING pack



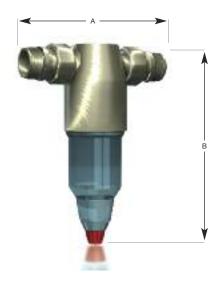
PERMO CRISTAL WF

The PERMO CRISTAL WF filter is an interchangeable screen filter designed for sanitary and industrial waters usages. It protects piping, couplings and various equipment located downstream by filtering all particles of a size greater than 90 μm such as iron oxides, sand, chips, hemp, etc. The untreated water enters the filter inlet, flowing through the filtering element from outside to inside.

The water, free of > 90 μm particles, is conveyed towards its point of use. The particles trapped in that way fall into the outer part of the filter.

Product type

Туре	PERMO Cristal WF 1"	PERMO Cristal WF 1"1/4	PERMO Cristal WF 1"1/2	PERMO Cristal WF 2"	PERMO Cristal WF 2"1/2	PERMO Cristal WF 3"		
Coupling diameter	DN 25/1"	DN 32/1"1/4	DN 40/1"1/2	DN 50/2"	DN 65/2"1/2	DN 80/3"		
Flow rate with 0.2 bar head loss m3/h	3.5	4	9	12	25	32		
Max. water tempera- ture (°C)		30						
Fineness of filtration, micrometers		90/	110		25	25		
Consignment weight kg	2	2.2	4.8	5	5	6		
Product code	P0003197	P0003198	P0003199	P0003200	P0003539	P0003540		
Delivery days	14							



Dimensions

	A : Height mm Total outside width	B : Width mm Total outside width
PERMO Cristal WF 1"	184	239
PERMO Cristal WF 1"1/4	203	239
PERMO Cristal WF 1"1/2	254	290
PERMO Cristal WF 2"	274	290
PERMO Cristal WF 2"1/2	304	770
PERMO Cristal WF 3"	313	770



PERMO CELSIUS

Permo Celsius filters are screen filters (90 to 110 microns) for drinking water circuits or industrial water up to 80 °C. They are designed to protect water piping and various types of equipment downstream, including valves and stop valves, against damage caused by suspended particles often present in distribution water grids.

(erosion, corrosion under deposits, sand, etc.). The water enters the filter inlet, flowing through the filtering element from outside to inside. The water, free of $> 90/110 \ \mu m$ particles, is conveyed towards its point of use

while the trapped particles fall into the outside part of the filtering element.



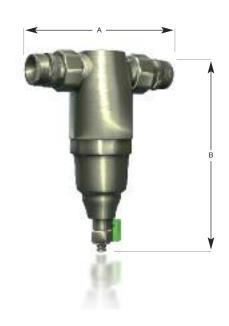
Product type

Туре	PERMO Celsius 3/4''			PERMO Celsius 1''1/2	PERMO Celsius 2"		
Coupling diameter	DN 20/3/4"	DN 25/1"	DN 32/1"1/4	DN 40/1"1/2	DN 50/2"		
Flow rate with 0.2 bar head loss m3/h	3	3.5	4	9	12		
Max. water tempera- ture (°C)		80					
Fineness of filtration, micrometers		90/110					
Consignment weight kg	2	2	2	5	6		
Product code	P0010063	P0010064	P0010065	P0010066	P0010067		
Delivery days	14						

Dimensions

	A : Height mm Total outside width	B : Width mm Total outside width
PERMO Celsius 3/4"	184	242
PERMO Celsius 1"	184	242
PERMO Celsius 1"1/4	203	242
PERMO Celsius 1"1/2	254	300
PERMO Celsius 2"	274	300











PERMO FLASH

PermoFlash Filter is a continuous self-cleaning screen filter (90/110 microns) for the general protection of circuits, taps, valves and all types of home and public sector systems. It fights against damage caused by suspended particles often present in distribution water grids.

Back wash system for the manual model and a scrape finish using a segmented scraping suction system for the automatic model.

Instant discharge of impurities to drains with a load-break connector

Product type

Туре	PERMO Flash 1"1/4	PERMO Flash 1"1/2	PERMO Flash 2"	PERMO Flash DN 65	PERMO Flash DN 80	PERMO Flash DN 100	PERMO Flash DN 125
Coupling diameter	DN 32/1″1/4	DN 40/1"1/2	DN 50/2"	DN 65/2"1/2	DN 80/3"	DN 100/4"	DN 125/5"
Flow rate with 0.2 bar head loss m3/h	5	9	11	22	36	85	100
Max. water tempera- ture (°C)		30					
Fineness of filtration, micrometers		90/110					
Product code Manual filter	P0010072	P0010073	P0010074	PK0033932 A	PK0033933 A	PK0033934 A	PK0033935 A
Consignment weight kg	6	7	7	17	15	40	43
Manual filter delivery in days		14			3:	5	
Product code Automatic filter	P0010077	P0010078	P0010079	PK0033936 A	PK0033937 A	PK0033938 A	PK0033939 A
Consignment weight kg	6	8,5	36	36			
Automaticl filter deli- very in days		14			3.	5	

Dimensions

	A : Height mm Total outside	B : Width mm Total outside
PERMO Flash 1"1/4	218	460
PERMO Flash 1"1/2	240	460
PERMO Flash 2"	260	460
PERMO Flash DN 65	220	550
PERMO Flash DN 80	220	550
PERMO Flash DN 100	350	690
PERMO Flash DN 125	350	700



PERMO FTPAC SCREEN FILTER

BWT PERMO offers a range of filters suited to your heating pump and sand loaded water. Filtration is done through a stainless steel screen. When the filter becomes clogged, the pressure difference increases between the inlet and outlet. The pressure switches on the filter detects this excess pressure and triggers the back flush: the solenoid valve at the bottom of the filter opens and suspended matter is evacuated outside the filter.

Installation: These filters are installed after the heating pump and ahead of a membrane tank (flask). Installation is very easy.

Dawr

Product type

Туре	PERMO FTPAC 5 PERMO FTPAC 10			
Coupling diameter	1" 1"1/2			
Flow rate m³/h	5 10			
Pressure max bar	7			
Fineness of filtration µm	150			
Consignment weight kg	10			
Product code	P0003680 P0003681			
Delivery days	14			

Dimensions

	A : Height mm Total outside width	B : Width mm Total outside width
PERMO FTPAC 5	230	330
PERMO FTPAC 10	260	370







SINGLE CARTRIDGE HOUSING

PERMO has developed a range of single-cartridge cases which can be installed in pre-treatment, process and in treatment at points of use. Main applications:

- LP 10 / LP20 for filtration of 100 -1 µm and dechlorination
 PCY 10 / PCY20 for microfiltration 0.45 / 0.2 / 0.1 µm
- BIGBLUE for dechlorination

Product type

Туре	LP10 PP	LP10 PP + blow off	LP20 PP	LP20 PP + blow off	PCY 10	PCY 20
Coupling dia- meter	DN 20/3/4" DN 25/1			DN 20/3/4"		
Type of car- tridge connection	DOE Cod			DOE		
Cartridge width	9 3/4''		20''		10''	20''
Product code	P0048324	P0048320	P0048319	P0048321	P0096342	P0096341
Delivery days	14					



Туре	Big Blue 10''	Big Blue 20" DN 25	Big Blue 20" DN 40		
Coupling diameter	DN 2	DN 40/1"1/2			
Type of cartridge connection		DOE			
Cartridge width	10''	20"			
Product code	P0955257	P0955258	P0955229		
Delivery days	14				



HIGH FLOW RATE

PERMO high flow rate casings allow specific treatment of your installations. Dechlorination, nominal filtration, absolute filtration, they can be used for very large flow rates.

HD casings or CMC casings, a wide range of stainless steel casings is available.

Carter HD

The PERMO HF Housing monocartridge case allows filtering of 40 to 80 m 3 /hr with retention thresholds of 40 to 1 μ m. The cases are made of electropolished 316L stainless steel with V-Band collar fastening. Two types of case:

- 40" vertical monocartridge
- 60" horizontal monocartridge

The input/output connections have DN100 PN16 flanges.

Туре	PERMO HD 40''	PERMO HD 60"		
Coupling diameter	DN 100 flanges			
Cartridge width	40''	60''		
Product code	P0048846	P0048847		
Delivery days	21			

Carter CMC (cartridge code 8)

The CMC filter is designed for the filtration of drinking and industrial water. Thanks to a wide selection of filtering elements of various degrees of filtration fineness. The CMC filter is ideal for the specific conditions of industry. The 316 L stainless steel body can house 3 (DN50 flanges), 6 or 12 (DN80 flanges) 20" to 40" filter cartridges.

Туре	803				806		812		
Coupling dia- meter	DN 50			DN 80			DN 80		
Cartridge width	20	30	40	20	30	40	20	30	40
Product code	P0048802	P0048803	P0048804	P0048807	P0048808	P0048809	P0048812	P0048813	P0048814
Delivery days					21				

Accessories

Accessories	Separator for DOE cartridge	Set of 3 guide rods + 3 cups for DOE cartridges		
Cartridge Type	DOE	20''	30"	40"
Product code	P0048304	P0048882	P0048883	P0048884
Delivery days		21		













PRETREATMENT CARTRIDGE

A wide range of filter cartridges designed to both eliminate the main particles in treated water and protect your systems from contaminating bacteria. The cartridges are available to match many requirements in respect of coupling, size, filtration threshold and type of medium.

PERMO PROPYL EXTRUDED MODELS

Туре		1 µm	5 µm	10 µm	20 µm	50 µm	75 µm
PERMO Cartridge Propyl 10"	set of 36	PK0098180	PK0098181	PK0098182	PK0098183	PK0098184	PK0098185
PERMO Cartridge Propyl 20''	set of 24	PK0098220	PK0098221	PK0098222	PK0098223	PK0098224	PK0098225
Delivery days				14			

PERMO POLYPURE POLYPROPYLEN MODELS



Туре			0,2 µm	1µm	5 µm	10 µm
PERMO Cartridge	9" 3/4		PK0094824	PK0094827	PK0094830	PK0094835
Polypure DOE	20"		PK0094825	PK0094828	PK0094831	PK0094836
	20"	set of	PK0094839	PK0094852	PK0094901	PK0094915
PERMO Cartridge Polypure Code 8 (222 point)	30"		PK0094840	PK0094853	PK0094902	PK0094916
	40''		PK0094841	PK0093618	PK0093594	PK0093303
Delivery days	14 days except ** 60 days and *** 30 days					

PERMO HD POLYPROPYLEN MODELS



Туре			40 µm	20 µm	10 µm	1 µm
	40′′		PK0050819	PK0050817	PK0050815	-
Propure HD	60''	set of	PK0050820	PK0050818	PK0050816	-
Delimina UD	40''	40''	-	-	PK0094858	PK0094854
Polypure HD	60''		-	-	PK0094859	PK0094855
Delivery days	30					

DECHLORINATION CARTRIDGE

A wide range of filter cartridges designed to both eliminate the main particles in treated water and protect your systems against acteria. The cartridges are available to match many requirements in respect of coupling, size, filtration threshold and type of medium.

Product type

		Surbobinée	Aex	Aex HE
Activated carbon cartridge 10''	set of 50	PK0048221	-	-
Activated carbon cartridge 10" DOE	set of 6	-	PK0093146	PK0093154
Activated carbon cartridge 20" DOE	set of 6	-	PK0093147	PK0093155
Activated carbon cartridge 30'' Code 8	set of 6	-	PK0093152	PK0093156
Activated carbon cartridge 40'' Code 8	set of 6	-	PK0093153	PK0093157







Cartridge Big Blue

		Seuil 5 microns
Activated carbon cartridge Big Blue 10''	set of 4	PK0955265
Activated carbon cartridge Big Blue 20''	set of 4	PK0955266





POLISHING CARTRIDGE

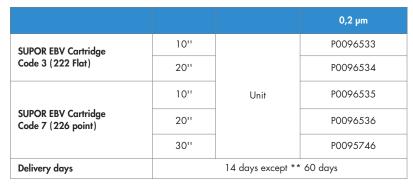
A broad range of filtering cartridges for microfiltration ensuring limitation or elimination of bacteria present in closed loops or even in your points of use.

PERMO PROPYL EXTRUDED MODELS

			0,2 µm	0,1 µm	
SUPORFLOW Cartridge	10''		P0096391	P0096525 **	
Code 3 (222 Flat)	20''		P0096392	P0096526 **	
	10''		P0096393	P0096527	
SUPORFLOW Cartridge	20''		P0096395 **	P0096528	
Code 7 (226 point)	30''	Unit	P0095646 **	S.C **	
	40''		P0093417	P0098354 **	
	20''		P0097101	P0097133**	
SUPORFLOW Cartridge Code 8 (222 point)	30''		P0097102 **	P0097134**	
	40''		P0950299	P0950330 **	
Delivery days	14 days except ** 60 days				



PHARMA GRADE - DOUBLE LAYER





POLISHING CARTRIDGE

Our range of vents ensures a high degree of process integrity and protection. They are widely used in the pharmaceutical and biotechnology industries. They are designed to limit bacterial contaminations.

TANK VENT MODELS

Emflon PFA 0,2 µm single Layer (without N2 and without 03) Code 7	10''	Unit	P0950327		
Emflon PFA 0,2 µm single Layer (without N2 and without 03) Code 7	20''	Unit	P0095715		
Emflon PFA 0,2 µm single Layer (without N2 and without 03) Code 7	30''	Unit	P0950843		
Emflon PFR 0,2 µm double layer (Inerting N2) Code 7	5''	Unit	P0950291		
Emflon PFR 0,2 µm double layer (Inerting N2) Code 7	10''	Unit	P0950202		
Emflon PFR 0,2 µm double layer (Inerting N2) Code 7	20''	Unit	P0096862		
Emflon PFR 0,2 µm double layer (Inerting N2) Code 7	30''	Unit	P0950099		
Emflon CPFR 0,2 µm double layer (disinfection 03 or heat 120°C) Code 7	5''	Unit	P0916259		
Emflon CPFR 0,2 µm double layer (disinfection 03 or heat 120°C) Code 7	10''	Unit	P0950050		
Emflon CPFR 0,2 µm double layer (disinfection 03 or heat 120°C) Code 7	20''	Unit	P0950060		
Emflon CPFR 0,2 µm double layer (disinfection 03 or heat 120°C) Code 7	30''	Unit	P0900002		
Capsules	Emflon II	Unit	P0950412		
Capsules	Filter type DKA 0,3µm	Unit	P0048224		
Delivery days		21 days			











PERMO 1500/2000

The filtration through a deep bed of sand or anthracite of particles, whose dimensions are less than filter bed intervals, works under the following overall conditions. The filters are generally the closed type under pressur.

The filtering mass contained in the filter body is made up of one or more superimposed layers of calibrated pellets composed of:

- quartz sand (surface filtration)
- anthracite (deep bed filtration)
- sometimes superimposed sand and anthracite
- active carbon when organic matter or chlorine must be removed

The most common grading ranges from 0.5 to 1.35 mm; coarser grades are sometimes used as support layers.

PERMO filter 1500

PERMO 1500 filters are used for turbid water clarification with a quartz sand filling material, but also for neutralization and dechlorination.

Туре	1500 Active carbon	1500 Sand	1500 Neutralite			
Coupling diameter	DN 40/1″1/2					
Consignment weight kg	Included					
Product code	PK0001790 PK0001715 PK0001791					
Delivery days	30					

PERMO SAND FILTER 2000/VINYLESTER BODY

Туре	2053	2061	2076	2076	2091		
Coupling diameter		DN 40			DN 40	DN 50	
Consignment weight kg			Inclu	ıded			
Product code Ma- nual filter	PK0003900	PK0003902	PK0003904	PK0003906	PK0003908	PK0003910	
Product code Auto- matic filter	PK0003901	PK0003903	PK0003905	PK0003907	PK0003909	PK0003911	
Automatic filter de- livery in days			4	.5			
Double layer filling Code (sand + anthracite) associated	PK0003100	PK0003104	PK0003108	PK0003108	PK0003112		
Consignment weight kg			Inclu	ıded			
Double filling layer delivery days			1	4			
Associated active carbon filling material Code	PK0003102	PK0003102 PK0003106 PK0003110 PK0003110 PK0003114			03114		
Consignment weight kg	Included						
Filing CA delivery days			1	4			



PERMO 2000

Double layer filling Code (sand + anthracite) associated PERMO 2000 filters, washed by a backflow system, are used in different ways according to version:

- \bullet for turbid water clarification with a filling material of quartz sand or sand $\,+$ anthracite
- for the neutralization of aggressive waters, filled with neutralite

These filters are available in their manual or automatic versions with galvanized body or in polyester.

PERMO SAND FILTER 2000/GALVANIZED STEEL BODY

Туре	2165	2180	21	95		2225	
Coupling diameter	DN	40	DN 40	DN 50	DN 40	DN 50	DN 65
Consignment weight kg				Included			
Product code Manual filter	PK0003912	PK0003914	PK0003916	PK0003918	PK0003920	PK0003922	PK0003924
Product code Automatic filter	PK0003913	PK0003915	PK0003917	PK0003919	PK0003921	PK0003923	PK0003925
Manual and Auto- matic filter delivery in days				45			
Associated silex fil- ling material Code	PK0003130	PK0003130 PK0003140 PK0003150 PK0003160					
Consignment weight kg				Included			
Silex filling mate- rial delivery in days				14			
Associated neu- tralite filling ma- terial Code	PK0003132	PK0003142	PK000)3152		PK0003162	
Consignment weight kg				Included			
Delivery in days charge				14			
Associated « magno » filling material Code	PK0003134 PK0003144 PK0003154 PK0003164						
Consignment weight kg	Included						
Delivery in days charge magno				14			











PERMO 2500

PERMO 2500 filters can be used in different ways according to the version:

- for turbid water clarification with a filling material of quartz sand or sand + anthracite
- \bullet for dechlorination treatment of specific types of waters requiring a flow treatment through ACTIVE CARBON.

These filters are available in automatic version with resin body.

Product type

Туре	2500-61	2500-77	2500-93	2500-107
Coupling diameter		DN	50	
Consignment weight kg		Inclu	uded	
Product code Automatic filter	PK0003805	PK0003806	PK0003807	PK0003808
Delivery day filter		4	5	
Double layer filling mat- rial Code (sand + an- thracite) associated	PK0003104	PK0003108	PK0003112	PK0003116
Consignment weight kg		Inclu	uded	
Double layer filling material delivery in days		1	4	
Associated active car- bon filling material Code	PK0003106	PK0003110	PK0003114	PK0003118
Consignment weight kg	Included			
Delivery in days charge ACTIVE CARBON		1	4	

Dimensions

Туре	A : Height mm	B : Width mm
Filter 2500 SF610	610	2150
Filter 2500 SF770	770	2300
Filter 2500 SF927	927	2400
Filter 2500 SF1074	1074	2300



PERMO FPM/ECOFILDEB

The PERMO FPM clarification filter with pocket and magnetic bar is especially efficient for desludging heating circuits, chilled loops and cooling circuits. We recommand to use complementary anticorrosion and antiscaling inhibiting treatments.

The PERMO FPM filter with pocket is installed on the return circuit of the installation to be purified.

The ECOFILDEB version is a mobile filtration unit on a stainless steel frame ready to be put in place, preconnected to the installation hydraulically and electrically.

Product type

Туре	FPM	5/9	FPM 1	0/20	FPM 2	21/30	FPM 3	31/50	
Coupling diameter	DN 25,	/1″ gaz	DN 50,	/2″ gaz	DN 50,	/2″ gaz	DN 80,	/3″ gaz	
Flow rate nomi- nal maxi m³/h	Ç	>	20		30		5	0	
Consignment weight kg	1	0	2	22		29		30	
Material Filter	Steel	Stainless steel	Steel	Stainless steel	Steel	Stainless steel	Steel	Stainless steel	
Product code	P0003856	P0967942	P0003857	P0968647	P0003858	P0967941	P0003859	P0920377	
Delivery days	14								

Туре	FPM 80 Steel	FPM 120 Steel	FPM 160 Steel	FPM 220 Steel	FPM 320 Steel
Coupling diameter	DN 100	DN 150	DN 150	DN 200	DN 250
Flow rate nominal maxi m³/h	80	120	160	220	320
nb of bags	2	3	4	5	7
Product code	P0003652	P0003653	P0003654	P0003655	P0003656

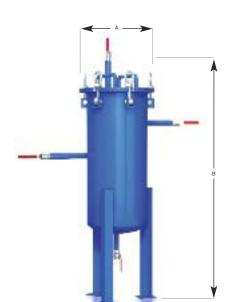
Туре	FPM 80 Stain- less steel	FPM 120 Stainless steel	FPM 160 Stainless steel	FPM 220 Stainless steel	FPM 320 Stainless steel
Coupling diameter	DN 100	DN 150	DN 150	DN 200	DN 250
Flow rate nominal maxi m³/h	80	120	160	220	320
nb of bags	2	3	4	5	7
Product code	P0003657	P0003658	P0003659	P0003660	P0003661

Туре	Ecofildeb 5/9 PN 10	Ecofildeb 10/20 PN 10	Ecofildeb 10/20 PN 16	Ecofildeb 21/30	Ecofildeb 31/50
Coupling diameter	DN 25/1" gaz	DN 50/2" gaz	DN 50/2" gaz	DN 50/2" gaz	DN 50/2" gaz
Flow rate nomi- nal maxi m³/h	9	20	20	30	50
Consignment weight kg	50	50	50	80	100
Material Filter	Steel	Steel	Steel	Steel	Steel
Product code	PK0003866	PK0003867	PK0003868	PK0003869	PK0003870
Delivery days	14		21		









PERMO FPM CYCLONIQUE

The PERMO FPM CYCLO is a filter placed in a system shunt on the return of the installation to be cleaned. Water enters the filter tangentially; the centrifugal force precipitates heavy particles to the bottom of the filter. A magnetic cylinder retains the metal oxide particles. The water comes out of the top of the filter without the sediments. The filter regenerates by cleaning the magnetic part and flushing the lowest points of the filter.

Product type

Туре	FPM Cyclonique Type 1	FPM Cyclonique Type 2	FPM Cyclonique Type 3	FPM Cyclonique Type 4	FPM Cyclonique Type 5	FPM Cyclonique Type 6
Coupling diameter	DN 25 1" gaz	DN 40 1″1/2 gaz	DN 40 1″1/2 gaz	DN 50 2" gaz	DN 65 Flange	DN 80 Flange
Flow rate nominal maxi m³/h	4	9	12	16	22	28
Consignment weight kg	48	98	146	146	158	10
Product code	P0003805	P0003806	P0003807	P0003808	P0003809	P0003810
Delivery days	21					

Accessories

Name	item Code
CyclonicFPM filter pack FPM 1 + Accessories	PK0038005
CyclonicFPM filter pack FPM 2 + Accessories	PK0038006
CyclonicFPM filter pack FPM 3 + Accessories	PK0038007
CyclonicFPM filter pack FPM 4 + Accessories	PK0038008
CyclonicFPM filter pack FPM 5 + Accessories	PK0038009
CyclonicFPM filter pack FPM 6 + Accessories	PK0038010
set add/filterCyclo. FPM 1	P0003804
set add/filterCyclo. FPM 2.3	P0003811
set add/filterCyclo. FPM 4	P0003812
set add/filterCyclo. FPM 5	P0003813
set add/filterCyclo. FPM 6	P0003814

Dimensions

Туре	A : Height mm	B : Width mm
Type 1	250	900
Type 2	350	1130
Type 3/4	450	1130
Type 5	450	1130
Type 5	450	1130



PERMO DESLUDGING PACK

The protection antiscalling of your heating system and chilled loops calls for a full anticorrosion and sludge prevention programme. The presence of sludges corrosion and loss of efficiency, and calls for major maintenance.

The PERMO DESLUDGING PACK comprises a system cleaning product, a PERMO ECOFILDEB filter to be mounted in parallel on the return system, the anticorrosion product and the antiscalling product.

type Pack

Туре	Desilting Pack IW (Iced Water)				
Product code	PK0047006	PK0047011	PK0047021		
Network volume	0-5 m ³	5-10 m ³	10-20 m³		

Туре	Desilting Pack HW (Heating Water)		
Product code	PK0047005	PK0047010	PK0047020
Network volume	0-5 m³	5-10 m ³	10-20 m³

Туре	Desilting Pack Aluminium		
Product code	PK0047007	PK0047012	PK0047023
Network volume	0-1 m³	1-2 m³	2-3 m³
Delivery days	14		





INJECTION/ DISINFECTION/ANALYSIS





- Injection Dosing Unit
- Pulse Transmitter counter
- Disinfection PERMO EcoBox ECS
- Disinfection PERMO Biox II
- Disinfection PERMO Eco MX
- Neutralisation PERMO Neutra
- Disinfection UV PERMO Biostil
- Disinfection PERMO Ultrason
- Analyser PERMO Diomede
- Analyser PERMOCONTROL (Conductivimeter)
- Analyser PERMO probox

INJECTION



DOSING SYSTEM

Dosing units are designed for the injection of BWT chemicals depending on

system volumes and types of pump and water meter.

The unit is made up of a dosing pump and a storage tank which can be linked to a teletransmission contact meter.

Great precision of dosing and treatment homogenization thanks to the limited

volume of water. Graduated reagent tank in translucent polyethylene with emptying plug and low level controller.

A retention tank to ISO 14000 can be supplied as option.

Product type

Туре	XB3, 125 L tank	Dosing unit PERMOMedo 6 XG, 125 L tank fully equipped	G, 125 L tank	Dosing unit PERMOMetric 60 l/h, 200 L tank fully equipped	Permo SAS doser 15 l	Permo SAS doser 40 l	
Max. backflow pressure (bars)	10	7	10	10	-	-	
Injection rate (min)	180	180	NC	120	-	-	
Volume per burst (cm³)	0,41	0,66	NC	3,8	-	-	
Max dosing rate in li- ters/hr (bar)	5 (5)	8,4 (3,5)	6	27	-	-	
Consignment weight kg	14	14	14	16	-	-	
Product code	PK0027103	PK0027115	PK0028106	PK0002804	P0002010	P0002020	
Delivery days		14					

Accessories associated with dosing pumps

Accessories	Product code	Delivery days
Dosing tank 60 l	P0028041	14
Dosing tank 125 l	P0028042	14
Retention tank jerrycan	P0028061	14
Retention tank for 125 L and 60 l tank	P0028011	14
4 drums retention palet	P0973264	21
2 drums retention palet	P0973265	21
Retention IBC Station XXL 1050 I	P0973266	21
Retention IBC StationXL 1050	P0973267	21
2 drums retention palet	P0973268	21
Hot water injection pipe	P0028032	21
Transfer pump for jerrycan	C0921738	14
Transfer pump for drum	C0921739	14



PULSE TRANSMITTER WATER METER

Permo water meter are of the double pulse type to drive your dosing pump and softener $\,$



Product type

Туре	Counter DN 20/ 3/4"	Counter DN 25/ 1"	Counter DN 32/ 1"1/4	Counter DN 40/ 1''1/2	Counter DN 50/ 2"	Counter DN 50 flanges	Counter DN 80	Counter DN 100
Coupling diameter		threaded BSP					ange PN	10
Water flow volume between two pulses (liters)	1	1	1	5	5	50	50	50
Consignment weight kg	1,5	2,5	3	4,2	12	16	27	38
Product code	P0005342	P0005325	P0005329	P0005335	P0005338	P0005320	P0005347	P0088239
Delivery days		14					30	

Which meter should be selected?

The table below indicates the basic water meter to be used to match the flow rate of the water to be treated with PERMO liquid chemicals.

Max. flow to be	l/sec.	0,5-1,1	1,1-4,4	4,4-6,4	6,4-11	11-25	25-33
treated	m³/h	1,8-4	4-16	16-24	24-40	40-90	90-120
Counter	Ø	DN 25	DN 40	DN 50	DN 50	DN 80	DN 100
Counter	Couplings	tŀ	readed BS	SP .	Fl	ange PN 1	0
	loss of head at maximum flow rate in m.ce	1	4	6	5	5	1
Flow rates	mini. for precision ± 2% m3/h	0,28	0,8	1,2	3	8	12
	starting threshold L/h	70	200	300	450	1200	1800



DISINFECTION



PERMO ECOBOX ECS

For the efficient control of legionella development in DHW networks while limiting the corrosion of metals, PERMO has developed and marketed a chlorination kit made up of equipment preassembled in the factory on a very compact wall panel (730x540) in order to ensure discontinuous and regular injections.

The innovation of the ECOBOX ECS (Hot drinking water) comes from its analysis chamber and a probe, both resistant to a temperature of 70°C. The amperometric sensor ensures a measurement range from 0 to 10 ppm of chlorine. This innovation avoids water discharges to drains.



Product type

Chlorination system PERMO	Equipments Included	Consignment weight kg	Product code	Delivery days
PERMO EcoBox ECS version 1	Complete panel supplied with a degassing pump installed on the panel	30	P0012310	14
PERMO EcoBox ECS version 2	Complete panel supplied with a MEDO 3 pump with tank to be installed under pressure (not installed on the panel)	30	PK0012302	14
PERMO EcoBox ECS version 3	Without dosing pump	27	P0012302	14
Chloration mobile skid	Eco Box version 1 on mobile skid	60	P0973413	21
Bag in box 20 kg of PERMO BWT DW-3002		20	P0008143BIB	14
Syscom software		1	P0012311	14
Dosing tank 60 l		4	P0028041	14
Retention tank jerry- can		3	P0028061	14
Retention tank for 60 L tank		6	P0028011	14
Safety instructions display panel		1	P0029810	14



PERMO BIOX II

Fighting micro-organisms – including legionella – is a major preoccupation in health, leisure and hotel establishments, as well as in the food industry, cooling towers and ornamental fountains.

The Permo BIOX is designed for the injection of CHLORINE DIOXIDE to disinfect both your cold and hot water networks.

Chlorine dioxide offers several advantages: germicidal action unrelated to pH, better remanence than chlorine, absence of undesirable subproducts.



Chlorine dioxide production	Product code	Délal days
Chlorine dioxide generator	P0029780	21
Permobiox Concentrated chlorine dioxide generator	P0029781	21
PERMO BIOX II Diluted chlorine dioxide generator + neutralizer vent	P0029782	21
PERMO BIOX II concentrated chlorine dioxide gene- rator + neutralizer vent	P0029783	21



Associated accessories

Associated products	Consignment weight kg	Product code	Delivery days
BIOX traceability interface	3	P0045419	21
USB recording + base + Biox software	3	P0045420	21
Injection pump TRUEDOS 5,5l/h	5	P0915783	21
Injection pump TRUEDOS 601/h	5	P0029820	21
Injection pump TRUEDOS 60I/h	1	P0028061	14
PERMO BIOX II standard acid 20 kg jerrycan	20	P0007335	21
PERMO BIOX II standard chlorite 20 kg jerrycan	20	P0007336	21
PERMO BIOX II concentrated acid 20 kg jerrycan	20	P0007338	21
PERMO BIOX II concentrated chlorite 20 kg jerry- can	20	P0007339	21

Local Analyser (without Probox)	Product code	Delivery days
Local Analyser ClO2 0-2 ppm	PK0029801	14
Local Analyser ClO2 + chlorites 0-2 ppm	PK0029802	14

Offset Analyser (with Probox)	Product code	Delivery days
Offset Analyser ClO2 0-2 ppm	P0002942	14
Offset Analyser ClO2 + chlorites 0-2 ppm	P0002941	14

Accessories	Product code	Delivery days
Portable gas detector	P0029802	1.4
Safety Instructions display panel	P0029810	14





DISINFECTION



PERMO ECO MX

The PERMO ECO MX, an innovative process based on in-situ and on-demand production of a solution of sodium hypochlorite (MX range) or a mixture of oxidants (MX+ range), operates solely with salt, water and electricity. Key advantages:

- No need to handle or store chemicals
- Instant disinfectant availability according to your needs.
- No more organic biocide in site discharges, no more packaging waste, no transport.
- The guarantee of on-going unit treatment
- Associated with the appropriate antiscaling and anticorrosion products
- Entirely automated





Product type

Accessories	ECO MX 1	ECO MX 2	ECO MX 3	ECO MX 1 +	ECO MX 2+	ECO MX 3 +
Free available chlorine produced by day	4,5 kg	9 kg	9 kg	1,8 kg	4,5 kg	9 kg
Average concentration of chlorine of the solution	8 g/l	8 g/l	8 g/l	2,7 g/l	3,35 g/l	3,35 g/l
Oxydising solutions manu- factured	NaOCl	NaOCl	NaOCl	NaOCI, ClO2, O3, H2O2	NaOCI, ClO2, O3, H2O2	NaOCI, ClO2, O3, H2O2
Daily production of solu- tion	570 liters	1130 liters	2270 liters	672 liters	1340 liters	2736 liters
Equivalent of commercial javel at 120g/l (37° chloro) (l/day)	38	76	151	15	38	76
Product code	S.C.	S.C.	S.C.	S.C.	S.C.	S.C.



DISINFECTION/NEUTRALISATION

PERMO NEUTRA

The neutralisation of your waste water is legally compulsory. Permo has developed a range of products which can satisfy many different requirements. Processing capacity: from1 to 5 m3/h*. The waste water to be neutralised are fed into a first tank then processed in a second. Once the neutralisation tank is full, the agitator is triggered and neutralisation takes place until the desired pH is reached.

If disinfection is required, it is performed after the neutralisation process.



Product type

Туре	PERMO NEUTRA 1	PERMO NEUTRA 2	PERMO NEUTRA 3	PERMO NEUTRA 5
Flow rate of neutralisation treatment m ³ /h	1	2	3	5
Flow rate of neutralisation treatment + disinfection m³/h	0,7	1,5	2,2	3,7



DISINFECTION



UV PERMO BIOSTIL

The PERMO UV disinfection range is used to disinfect drinking and industrial water. Water treated in that way is free of germs and pathogenic agents. UV disinfection does not cause any negative modification of treated water



Product type

Туре	UV Biostil SI 80 °T maxi 30°C	UV Biostil SI 240 °T maxi 30°C	UV Biostil SI 320 °T maxi 30°C	UV 200W/11 HW T° maxi 65 °C	UV 400W/17 HW T° maxi 65 °C	UV 600W/22 HW T° maxi 65 °C
Coupling diameter	DN 32	DN 80	DN 100	DN 50	DN 80	DN 100
Number of generators	1	3	4	1	2	3
Product code	P0093794	P0094416	P0095707	P0029283	P0994199	P0994200
Delivery days			4	.5	1	



Dimensions

A : Height mm Total outside	B : Width mm Total outside
115	1100
220	1200
360	1200
N.C.	N.C.
N.C.	N.C.
N.C.	N.C.
	115 220 360 N.C. N.C.



PERMO SONIC

PERMO SONIC: Ultrasonic generator

A complete and innovating equipment for a permanent efficiency on biofilm, bacteria, as well as algae and legionella thanks to a continuous action of specifics Ultrasonic. Ideal for water storage tanks treatment, ornament's basin, cooling tower and so on... It can contribute to the reduction of disinfectant oxidizing products.

ecosolution

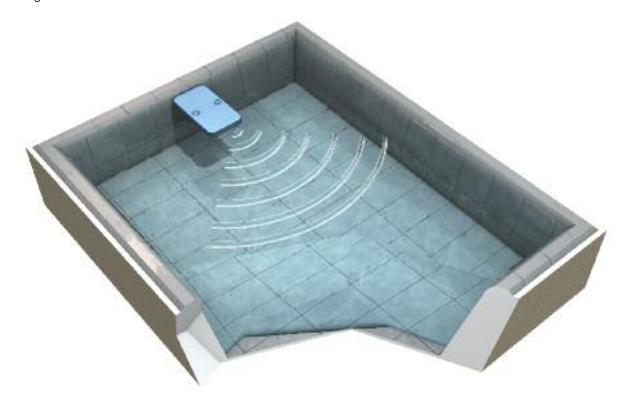


Product type

Туре	PERMO Sonic 70	PERMO Sonic 105	PERMO Sonic Swimming pool
Product code	P0012910	P0012911	P0012912
Delivery days		14	

PERMO advantages:

- Environmentally-friendly (works without chemical products)
- Effective against algae and bacteria including Legionella
- Very low energy consumption (max. 45 W)
- Silent and odourless
- No maintenance
- No modification required to existing installation
- Very low operating costs







PERMO DIOMEDE

Water treatment unit for cooling circuits providing fully autonomous and entirely safe risk management of fouling, corrosion and biological development. A comprehensive, smart system, PERMO DIOMEDE ensures water and treatment product consumption optimisation.

Product type

Analyser diomède	Product code	Delivery days	Content	
ANALYSER diomede	P0074800	21	Diomede box only	
Diomede without probe	PK0074802	21	DIOMEDE box + graphite conductivity probe	
Diomede with probe and chamber - box	P0074807	21	Graphite conductivity probe + 3-tap hole multipurpose measuring chamber + T°c probe + Free chlorine probe 0-2 ppm + standard pH electrode 0,5 bar + Converter for pH probe 4-20 mA	

Associated accessories

Accessories	Consignment weight kg	Product code	Delivery days
Manual valve DN 20	1	P0031601	21
Solenoid valve DN 20 (220 v)	2	P0040061	14
Manual valve DN 25	1	P0093667	21
Solenoid valve DN 25 (220 v)	2	P0040058	14
Manual valve DN 32	1	P0040075	21
Solenoid valve DN 32 (220 v)	5	P0040062	14
Manual valve DN 40	1	P0031602	21
Solenoid valve DN 40 (220 v)	4,5	P0040064	14
Graphical display conductivity probe	0,1	P0060480	
Analysis chamber			
Inductive conductivity probe	0,1	P0060485	21
Temperature probe	0,1	P0060057	14
Standard pH electrode 0,5 bar	0,1	P0060055	21
pH converter 4-20 mA	0,2	P0060484	21
Feed module for inductive probe	1	P0060487	21
Electrode for measuring oxidizer			
Inductive conductivity probe 0-2mS	0,1	P0060485	21
Inductive conductivity probe 0-10mS	0,1	P0060486	21



PERMOCONTROL (CONDUCTIVITY METER)

The PERMO Control S

Designed for qualitative analysis of fluids, the PERMO Control S enables measurement of demineralised water from 0 to $5M\Omega$. It is simple, reliable and robust. PERMO Control S is powered by a 230V/50Hz preinstalled cable 1.5 metres long.

The PERMO Control RM1 / RM2

It measures conductivity (or resistance) and temperature. Selection of measurements in OHMs or SIEMENS is made on the menu. It is designed for analysis of fluids in industrial or service environments. Measurements are completely managed by a DSP type microcontroller. There are two analogue outputs, one for the measurement and one for temperature.

Туре	PERMO Control S	Probe for PERMO Control S	PERMO Control RM1 + *CP	PERMO Control RM2
Product code	P0002911	P0002912	P0002967	P0002968
Output 4-20 mA	Non	Non	Oui	Oui
Delivery days			14	





PERMO MULTI CONTROL

Modular system

Wide range of applications: Drinking water treatment/Reverse osmosis / Ultra-pure water/ Industrial water treatment

Applications:

- Flow control, analysis monitoring, etc.
- PID (multifunctional)
- Multi-parameter transmitter/ Flow, pH/ORP, conductivity controller
- 6 control functions (PID, timer, volume doser, etc.)
 Base unit with power supply, 2 digital inputs, 2 analogue outputs.
- 2 digital outputs, SD card.
- Up to 6 additional independent cards may be added
- Graphic display
- Configuration through the display and may be duplicated by SD card (upload/download)

Туре	PERMO Multi Control 1 pH	PERMO Multi control 1 Cond	PERMO Multi control 2 Cond	PERMO Multi control 1pH + 1Cond			
Product code	P0077030	P0077031	P0077032	P0077033			
To be associated	Probe + Cable + Porte sonde + Option						
Delivery days	21						

Nom	Product Code	Delivery days
Sensor cond.Type 8220 k=0.01	P0060300	
Sensor cond.Type 8220 k=1	P0060301	
Probe PT1000	P0005070	
Unitrode PH probe + PH	P0005071	
Unitrode Redox Probe + PH	P0005072	
P/PH or Redox frame	P0005073	
Probe connection cable/8619 5M	P0079358	
Connection cable PT1000/8619 5M	P0079359	
Rac.Union DN20 P/Sens.PH/RED	P0079250	
Rac.Union DN20 P/Sens.Cond	P0079251	21
Rac.Union DN25P/Sens.PH.RED	P0079252	
Rac.Union DN25P/Sens.Cond	P0079253	
Rac.Union DN32 P/Sens.Cond.+PH	P0079254	
Rac.Union DN40 P/Sens.Cond.+PH	P0079255	
Rac.Union DN50 P/Sens.Cond.+PH	P0079256	
Takeover Collar DN65	P0048178	
Takeover Collar DN80	P0048179	
PID regulation	P0048180	
Memory card	P0048181	



PERMO PROBOX

The PERMOPROBOX on-line analyser is designed to analyse a large number of physicochemical parameters using a range of probes.

It is marketed as a complete unit or as a kit to meet specific needs.

Product type

COMPLETE ANALYSER	Consignment weight kg	Product code	Delivery days
Probox temperature -5° to 45° PVC	Included	P0002957	21
Probox pH multipurpose chamber	Included	P0002956	21
Probox Free Chlorine 0-2 ppm	Included	P0992736	21
Probox Free Chlorine 0-10 ppm	Included	P0002951	21
Probox Active Chlorine 0-2 ppm	Included	P0002952	21
Probox Active Chlorine 0-10 ppm	Included	P0002953	21
Probox Total Chlorine 0-2 ppm	Included	P0002954	21
Probox Total Chlorine 0-10 ppm	Included	P0002955	21
Probox ClO2 0-2 ppm	Included	P0002942	21
Probox ClO2 0-2 ppm + chlorites 0-2 ppm	Included	P0002941	21

Material to be composed

Unit to be made up	Consignment weight kg	Product code	Delivery days
Standard Probox unit	Included	P0029010	21
Associated chambers			
Measurement chamber 1 oxidiser probe	Included	P0029114	21
pH measuring chamber	Included	P0029112	21
pH and oxidiser measuring chamber	Included	P0029111	21
Associated probes			
PVC temperature probe	Included	P0060057	21
Stainless steel temperature probe 45°C	Included	P0060068	21
Stainless steel temperature probe 80°C	Included	P0060069	21
Standard pH probe 0.5 bars	Included	P0060055	21
Standard pH probe 6 bars	Included	P0060056	21
Free Chlorine robe 0-2 ppm	Included	P0060060	21
Free Chlorine robe 0-10 ppm	Included	P0060061	21
Active Chlorine probe 0-2 ppm	Included	P0060062	21
Active Chlorine probe 0-10 ppm	Included	C0959553	21
Total Chlorine probe 0-2 ppm	Included	P0060064	21
Total Chlorine probe 0-10 ppm	Included	P0060066	21
Chlorine dioxide probe 0-2 ppm	Included	P0960515	21
Chlorine dioxide probe 0-10 ppm	Included	P0060067	21



* acide paracétique



REVERSE OSMOSIS UNIT





- Reverse osmosis unit PERMO Permaq Compact 11/18
- Reverse osmosis unit PERMO Permaq Compact 41/51
- Reverse osmosis unit PERMO Permaq Compact 100/270
- Reverse osmosis unit PERMO Permaq Eco
- Reverse osmosis unit PERMO Permaq Pico
- Reverse osmosis unit PERMO Permaq Mobile 350
- Decarbonatation PERMO Aquatherm



PERMO PERMAQ COMPACT 11/18

The ultra-compact PERMAQ COMPACT 11-18 osmosis unit allows a permeate flow of 50 l/hr to 100 l/hr. The COMPACT 11 12 14 models are horizontal and models 15 16 18 are vertical. A screen displays all major parameters such as pressure, permeate conductivity, flow rates and temperature. As standard, it includes an integral water leak sensor, dry alarm output contact, dry input contact for external starting/stopping, starting and stopping according to permeate pressure. It can operate online and offline with no technical modifications. The conversion rate is adjustable and is set automatically.



Product type

Туре	Permaq Compact 11	Permaq Compact 12	Permaq Compact 14	Permaq Compact 15	Permaq Compact 16	Permaq Compact 18
Positioning		Horizontal			Vertical	
Permeate	50 l/h	75 l/h	100 l/h	50 l/h	75 l/h	100 l/h
Purification percentage in salt	40 to 80 %					
Salt concentration mg/l			Less tha	n 1000		
Conversion rate %			30 to	75 %		
Raw water flow rate I/h	70 to 170	100 to 250	170 to 350	70 to 170	100 to 250	170 to 350
Raw water supply	3/4"					
Pressure bar			2 to	o 6		
Consignment weight kg	18 20 18 20			0		
Product code	P0045560	P0045561	P0045562	P0045563	P0045564	P0045565
Delivery days	21					

Dimensions

Туре	Permaq Compact 11	Permaq Compact 12	Permaq Compact 14	Permaq Compact 15	Permaq Compact 16	Permaq Compact 18
Width mm	150			390		
Height mm	390			150		
Depth mm	400 540		400	5.	40	



Reverse Osmosis-BWT PERMO

PERMO PERMAQ COMPACT 41/51

Selected rates of demineralised water production from PERMO PERMAQ COMPACT osmosis units can exceed 130 litres/hour with a residual conductivity of less than 50 μS .

Our space-saving PERMO PERMAQ COMPACT osmosis units integrate autonomous on-line distribution systems or off-line with storage tank and return system.

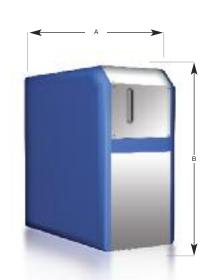
Product type

Туре	Permaq Compact 51 Permaq Compact 41			
Feed	DN 15/1/2"			
Permeate	150 l/h max 130 l/h max			
Salt retention rate	95%			
Storage	50 3,5			
Consignment weight kg	55			
Product code	P0004051 P0004052			
Delivery days	21			



Accessories

	Product code	Delivery days
STEEL FLASK WITH BLADDER /35 I	P0956270	21
STEEL FLASK WITH BLADDER /50 I	P0956271	21
STEEL FLASK WITH BLADDER /80 I	P0956272	21
STEEL FLASK WITH BLADDER /140 I	P0956273	21
STEEL FLASK WITH BLADDER /300 I	P0956274	21



Dimensions

Туре	Permaq Compact 51	Permaq Compact 41
A : Height mm	350	260
B : Width mm	750	520
Depth mm	560	670









PERMO PERMAQ COMPACT 100/270

Air conditioning, catering and industry are fields where high quality demineralised water is required for misting, washing and in a variety of processes. PERMO PERMAQ COMPACT reverse osmosis systems are compact units for the production of osmosed water with an integrated 100 to 270 liters storage capacity. They convert drinking water into pure water meeting the most demanding technical requirements.

PERMO PERMAQ COMPACT units are ready to use on site. Their design incorporates all internal and control connections.

Product type

Туре	Permaq Compact 111	Permaq Compact 112	Permaq Compact 113	Permaq Compact 114	Permaq Compact 115	Permaq Compact 116
Permeate I/h	50	100	150	200	250	300
Product code	P0004911	P0004912	P0004913	P0004914	P0004915	P0004916

Туре	Permaq Compact 271	Permaq Compact 272	Permaq Compact 273	Permaq Compact 274
Permeate I/h	110	220	310	430
Product code	P0004921	P0004922	P0004923	P0004924

Accessories

Accessories	Product code	Delivery days
Conductiv : TM-9503 + 4/20 mA	P0049211	21
ProbeK=0,09 P/TM-9503 0-500 microsiemens	P0049212	21

Dimensions

Туре	Permaq Compact 100	Permaq Compact 270
A : Height mm	580	580
B : Width mm	810	1360
Depth mm	580	580



Reverse Osmosis-BWT PERMO

PERMO PERMAQ ECO

Reverse osmosis is a membrane technique that physically separates the mineral and organic elements present in water without additional chemical products.

Permo PERMAQ-ECO is a space-saving, wall-mounted unit producing 130 l/h of osmosis purified water.

Product type

Туре	Permaq Eco On-line Permaq Eco Off-line				
Feed I/h	120 170				
Permeate I/h	90 130				
Salt retention rate %	9	95			
Permeate output %	75				
Consignment weight kg	59				
Product code	PK0004576 P0004577				
Delivery days	21				

Accessories

Accessories	Product code	Delivery days
STEEL FLASK WITH BLADDER /35 I	P0956270	
STEEL FLASK WITH BLADDER /50 I	P0956271	
STEEL FLASK WITH BLADDER /80 I	P0956272	21
STEEL FLASK WITH BLADDER /140	P0956273	
STEEL FLASK WITH BLADDER /300 I	P0956274	

Associated products

Associated products	Consignment weight kg	Product code	Delivery days	
Fumados SG33 (25 kg)	25	P0097984A		
Fumados SG33 (200 kg)	200	P0097985		
Osmoclean A (20 kg)	20	P0007472	14	
Osmoclean B (20 kg)	20	P0007473	14	
Oxy-aniolyse (4 jerrycan of 5 Ll)	20	P0093332		
Oxy-anios 5 (jerrycan of 30 kg)	30	P0093214		

Dimensions

Туре	Permaq Eco On-line	Permaq Eco Off-line
A : Height mm	200)
B : Width mm	170	0
Depth mm	200)









PERMO PERMAQ PICO

PERMO PERMAQ PICO transforms drinking water into pure water by the reverse osmosis method.

Particles, mineral salts and even organic impurities are held back. Seven units are available with capacities of from 80 to 1700 liters/h. PERMO PERMAQ PICO is especially used for the following activities: industry, hotels (glass rinsing), laboratories, machine parts rinsing, optical, air-conditioning, mixture water.

Product type

Туре	Permaq Pico 10- On line	Permaq Pico 20- On line	Permaq Pico 30- On line	Permaq Pico 40- On line	Permaq Pico 50- On line	Permaq Pico 60- On line	Permaq Pico 70- On line
Permeate I/h	130	230	340	415	750	1125	1500
Salt retention rate %		95					
Permeate output %		sup 80					
Consignment weight kg	85	100	105	130	140	160	170
Product code	P0004524	P0004525	P0004526	P0004527	P0004528	P0004529	P0004530
Delivery days	30						

Туре	Permaq Pico 10- Off line	Permaq Pico 20- Off line	Permaq Pico 30- Off line	Permaq Pico 40- Off line	Permaq Pico 50- Off line	Permaq Pico 60- Off line	Permaq Pico 70- Off line
Permeate I/h	170	310	450	560	1000	1500	2000
Salt retention rate %		95					
Permeate output %		sup 80					
Consignment weight kg	85	100	105	130	140	160	170
Product code	P0004516	P0004517	P0004518	P0004519	P0004520	P0004521	P0004523
Delivery days	30						

Accessories

Accessories/products	Product code	Delivery days
Multiblock (obligatory with on-line version)	P0004540	30

Dimensions

Туре	Permaq Pico 10	Permaq Pico 20	Permaq Pico 30	Permaq Pico 40	Permaq Pico 50	Permaq Pico 60	Permaq Pico 70
A : Height mm				475			
B : Width mm		800 1285					
Depth mm	450	590			73	30	



Reverse Osmosis-BWT PERMO

PERMO PERMAQ MOBILE 350

Reverse osmosis is a membrane technique which enables the physical separation of mineral elements. It has many different applications: washing, cleaning, filling of specific circuits.

The PERMAQ Mobile provides demineralised water whatever the usage purpose, (without pretreatment). Sturdy, easy to move and ready to use for professional jobs, it is supplied with two prefiltration cases to protect the osmosis membranes against particle damage.



Product type

Туре	Permaq Mobile 350
Raw water Flow rate 1/h	1000
Permeate I/h	350
Salt retention rate %	95
Permeate output %	35-40
Product code	P0004597
Delivery days	30

Dimensions

Туре	Permaq Mobil 350
A : Height mm	600
B : Width mm	1250
Depth mm	750







AQATHERM

Decarbonation processing: avoids scale and stabilizes the pH of the circuit water. It is ideally suited for all close circuits (heating, chilled water, etc, particularly if it contains aluminium and its alloys). The equipment is pre-tested and ready for use. The equipments is easy to move, sturdy and ergonomic.



Product type

Туре	PERMO Aqatherm Decarbo
Coupling diameter	DN 20
Service pressure bar	2 to 5
Pressure mini bar	1,5
Flow rate I /min	25
Resin volume	25
Water temperature maxi (°C)	5 to 30
Ambiant temperature	5 to 30
Consignment weight kg	45 Kg
Product code	PK0004461

Dimensions

Туре	PERMO Aqatherm D
A : Height mm	520
B : Width mm	680
Depth mm	1260



Reverse Osmosis-BWT PERMO



SWIMMING POOL





- Automatic Filtration PERMO Boy
- Manual Filtration PERMO Boy
- Filtration PERMO Azur
- Disinfection PERMO Log
- Swimming pools Accessories



AUTOMATIC PERMO BOY

The PERMO Boy is a sand filtration unit, with automatic valve controlled by micro-processor control unit. The PERMO Boy programmes filtration starting and stopping at the time of your choice in two time ranges per day. The PERMO Boy washes the filter mass automatically: the duration can be adjusted and the frequency is variable. The PERMO Boy displays the time continuously and allows the program to be checked at any moment

Product type

Туре	Boy Auto 610 With sand charge, without pump	Boy Auto 760 With sand charge, without pump	Boy Auto 760 With sand charge, wi- thout pump
Input/output connection dia- meter	2"	2"	2"
Inside filter diameter	610	760	920
Flow rate at 50 m/h m³/h	13	20	32
Filtrating area in m2	0,28	0,44	0,65
Code filter Boy	PK0006046	PK0006047	PK0006049
Associated Boy motopump group	Pump Boy 13 m³/h	Pump Boy 20 m³/h	Pump Boy 32 m³/h
Nominal Flow rate m ³ /h	13	20	32
Electrical power kW	1	1,3	1,9
Code One-phase Pump Boy associated	P0065900	P0065902	-
Code three-phase Pump Boy associated	P0065904	P0065906	P0065908
Delivery days		14	



MANUAL PERMO BOY

PERMO BOY Manual filters are a specific range intended to clarify individual swimming pool water, decorative basins, re-education water...





Туре	Boy Auto 610 With sand charge, wi- thout pump	Boy Auto 760 With sand charge, wi- thout pump	Boy Auto 760 With sand charge, wi- thout pump
Input/output connection diameter	2"	2	,,,
Inside filter diameter	610	760	920
Flow rate at 50 m/h m³/h	10	20	33
Filtrating area in m2	0,28	0,44	0,65
Filter Boy Manuel	Prestige	Prestige	Prestige
Code Filter Boy	PK0066033	PK0066034	PK0066035
Associated Boy motopump group	Pump Boy 13 m³/h	Pump Boy 20 m³/h	Pump Boy 32 m³/h
Nominal Flow rate m ³ /h	13	20	32
Electrical power kW	1	1,3	1,9
Code One-phase Pump Boy associated	P0065900	P0065902	-
Code three-phase Pump Boy associated	P0065904	P0065906	P0065908
Delivery days		14	







PERMO AZUR

PERMO AZUR filters are a specific range, intended for clarifying communal swimming pools, decorative basins, re-education...whether in hotels, camping, commercial buildings...
PERMO AZUR filters are polyester and glass fibre wound filters with an

PERMO AZUR filters are polyester and glass fibre wound filters with an internal coating. The inlets and outlets are polarised. The multimedia filter charge comprises sand and hydro-anthracite allowing better filtration of your water.

Product type

Article	Azur 1200	Azur 1400	Azur 1600	Azur 1800	Azur 2000	Azur 2350
Input/putput connection diameter	DN 100	DN 125	DN 125	DN 150	DN 200	DN 200
Inside filter diameter in mm	1200	1400	1600	1800	2000	2350
Flow rate to 40 m/h m3/h	46	62	81	102	126	174
Azur Filter Code	P0066012	P0066014	P0066016	P0066018	P0066020	P0066023
Code Charge associa- ted to Azur filter	PK0066062	PK0066064	PK0066066	PK0066068	PK0066072	PK0066073
Manual code assem- bly kit associated	P0066051	P0066052	P0066052	P0066053	P0066054	P0066054
Delivery days			3	0		
Automatic code as- sembly kit associated	V05001	V05002	V05002	V05003	V05004	V05004
Delivery days			4	5		
Associated Azur moto- pump group	Pump Azur 95/70	Pump Azur 95/80	Pump Azur 95/110	Pump Azur 95/110	2 x Pumps Azur 95/80	2 x Pumps Azur 95/110
Nominal flow rate m3/h	45	60	80	80	60	80
Electrical power kW	3	4	5,5	5,5	4	5,5
Code pump Azur as- sociated	P0066007	P0066008	P0066010	P0066010	P0066008	P0066010
Delivery days			3	0		



PERMO LOG

PERMO has developed a complete range of analysers \prime controllers allowing optimum injection of your disinfection products.

Remotor 2

Product type

Article	Analyser PERMO Log 1 Redox	Analyser PERMO Log 2 pH / Chlorine	Controler swimming pool PERMO pH / redox	PERMO MEDO XB3, Dosing Unit 125 L tank fully equipped	PERMO MEDO 6 XG, Dosing Unit 125 L tank fully equipped	Ozone ge- nerator S8ROzA + venturi
Consignment weight kg	6	6			included	
item Code	P0002923	P0002924	P0061703	PK0027103	PK0027115	P0006218 + P0006230
Delivery days			1.	4		





ACCESSORIES & PRODUCTS



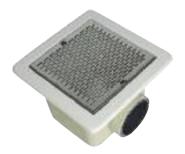


A large range of accessories to equip your basin, swimming pool or hydrotherapy: plugholes, skimmer, electrical equipment.











FORMULATED PRODUCTS





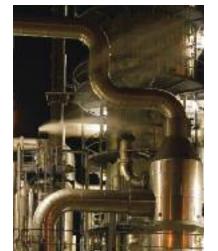
FORMULATED PRODUCTS

BWT RANGE OF CHEMICALS FOR WATER TREATMENT

BWT PERMO: expertise in the manufacturing, distribution, implementation and monitoring of chemicals for industrial and commercial water conditioning.

Our products are manufactured at the group's three European plants, and are distributed by our seventy subsidiaries and holdings around the world, especially in Europe.

Each subsidiary has its own warehouse to enable it to be closer to its customers.



Unique, entirely integrated chain of skills.

In addition to its in-house expertise in product formulation, BWT PERMO also designs, manufactures, distributes, installs, commissions and maintains a complete range of standard or customized water treatment systems.

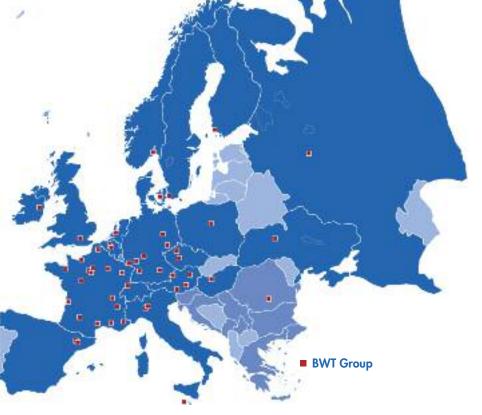
Both specialist in equipment and chemicals, BWT PERMO is a unique player in the water treatment market, able to offer the most comprehensive solution to your water problems.





Men and Women in BWT GROUP.

BWT's strength is based as much on the high quality and availability of its staff as it is on its high profile, consistent presence in its markets. All over Europe, its specialists work on-site with their customers, guiding them in the choice of the best technical and cost-effective solution, as well as its implementation and monitoring over time.





BWT PERMO: formulator and manufacturer



CLOSED HEATING SYSTEM AND CHILLED LOOPS

BWT permo conditioning programs based on the addition of formulated products aim at:

- Preparing surfaces with dispersing and passivating reagents
- Using specific corrosion inhibitors
- Using last generation synthetic polymer dispersants to keep surfaces clean

HEATING SYSTEMS

BWT name	BWT code	Packaging	Delivery days
	P0007263	25 kg	31**
BWT SH-1006	P0007264	250 kg	31**
1	P0007265	1200 kg	31**
BWT SH-1007	P0007266	20 kg	31**
	P0007267	200 kg	31**
,	P0007263 25 kg P0007264 250 kg P0007265 1200 kg P0007266 20 kg P0007267 200 kg P0007268 1000 kg P0007269 20 kg P0007270 200 kg P0007271 1000 kg P0008320BWT 20 kg P0008321BWT 200 kg P0008322BWT 1000 kg P0008364BWT 25 kg P0007363BWT 20 kg P0007363BWT 20 kg P0007364BWT 200 kg P0007364BWT 200 kg P0007365BWT 1000 kg	1000 kg	31**
	P0007269	20 kg	31**
BWT SH-1008	P0007270	200 kg	31**
,	P0007271	1000 kg	31**
	P0008320BWT	20 kg	14
BWT SH-1005	P0008321BWT	200 kg	14
,	P0008322BWT	1000 kg	14
BWT	P0008364BWT	25 kg	14
SH-7010	P0008365BWT	250 kg	14
	P0007363BWT	20 kg	14
SH-1004	P0007364BWT	200 kg	14
0.1.100-1	P0007365BWT	1000 kg	14
	P0007370BWT	20 kg	14
BWT CC-1004	P0007371BWT	200 kg	31**
	P0007372BWT	1000 kg	14



New BWT name	BWT code	Packaging	Delivery days
	P0008426BWT	10 kg	31**
BWT	P0008427BWT	25 kg	14
CC-1001	P0008428BWT	250 kg	14
	P0008430BWT	1200 kg	31**
	P0008420BWT	20 kg	14
BWT CC-1002	P0008421BWT	200 kg	31**
CC 1002	P0008422BWT	1000 kg	31**
	P0007395BWT	20 kg	14
BWT CC-1003	P0007396BWT	200 kg	14
CC 1000	P0007397BWT	1200 kg	31**
PERMO	P0008563B	25 kg	14
SANTAURE 1	P0008564B	250 kg	14

^{**}On demand







FORMULATED PRODUCTS







ANTI-FREEZING WATER TREATMENT

BWT Permo GLYCOLS guarantee:

- Effective protection against scaling and corrosion.
- Simple use and monitoring through its coloured liquid appearance.
 Increased high temperature stability
- Increased stability over time
- Treatment without amines, phosphates or nitrites.

BWT name	BWT Code	Packaging	Delivery days
	P0009645A	20	14
GLYCOL	P0009646A	210	14
N+	P0009647A	1000	14
		in bulk	
	P0009691A	20	14
GLYCOL	P0009692A	2101	14
N30 +	P0009693A	1000	14
		in bulk	
	P0009605A	20	14
₫ GLYCOL	P0009606A	210	14
SANIT +	P0009607A	1000 l	14
		in bulk	
	P0009720A	20	14
GLYCOL	P0009721A	2101	14
GLYCOL SANIT30 +	P0009722A	1000 l	14
		in bulk	

HOT AND COLD DRINKING WATER

The complete conditioning of a domestic or industrial system is dependant on a large number of parameters (the quality of the feed water, the design of the unit, operating conditions, etc) and calls for a variety of combinations and choices of chemicals. The regulatory aspects must necessarily be taken into account.

BWT name	BWT Code	Packaging	Delivery days
A 1	P0007091	20 kg	14
CSTB Aquasil	P0007093	1000 kg	14
CSTB: Aquasil D	P0007094	20 kg	14
	P0007375	20 kg	14
DEDMO FILM 105	P0009252	20	14
CSTB: PERMO FILM 105	P0009503	200	14
	P0009505	1000 l	14
CSTB: PERMO SET DP4	P0009272	20	14
PERMO DES-NET	P0007401	11	14
	P0009263	20	14
	P0007387	20 kg	14
CSTB PERMO SIL 101	P0009271	200	31**
	P0009287	1000 l	14
	P0008143BWT	20 kg	14
BWT DW-3002	P0008144BWT	200 kg	31**
	P0008145BWT	1000 kg	31**

^{**}On demand







FORMULATED PRODUCTS







CLEANING & DISINFECTION OPERATIONS

Today, energy exchange is widely employed in industrial processes such as steam generators, air coolers, heating or cooling systems, and condensers, to take just a few examples: the main problem encountered in this type of unit is due to the presence of dissolved salts in the fluid in circulation. Temperature causes these salts to precipitate and form a hard adhesive deposit. They are usually composed of calcium, sulphate, carbonate and sometimes iron or copper oxide. This fouling causes a not insignificant reduction in efficiency, so it is essential to solubilize it while limiting any acid attack on the metals encountered in the system. In this respect, the choice of a curative product is especially important.

BWT name	BWT Code	Packaging	Delivery days
	P0008574BWT	20 kg	14
BWT CS-4001	P0008575BWT	200 kg	14
	P0008576BWT	1000 kg	31**
	P0008515BWT	25 kg	14
BWT CP-5007	P0008516BWT	250 kg	31**
	P0008517BWT	1200 kg	31**
	P0008549BWT	25 kg	14
BWT CP-5001	P0008550BWT	250 kg	31**
	P0008551BWT	1000 kg	31**
	P0007343BWT	20 kg	14
BWT CP-5004	P0007344BWT	200 kg	14
	P0007345BWT	1000 kg	31**
BWT CP-5005	P0007248BWT	25 kg	31**
BWT CP-4004	P0007376BWT	20 kg	14
BWT CP-4003	P0008557BWT	20 kg	14
	P5449013BWT	20 kg	14
BWT CP-6001	P0007952BWT	225 kg	14
	P0007953BWT	1300 kg	31**
	P0007380BWT	25 kg	14
BWT CP-5002	P0007381BWT	200 kg	31**
	P0007382BWT	1000 kg	31**
	P0008360BWT	20 kg	14
BWT CP-5003	P0008361BWT	200 kg	31**
<i>i</i> -	P0008362BWT	1000 kg	31**
BWT CS-2003	P0008595BWT	20 kg	14
PERMO PRO AM	P0008526	25 kg	14

**On demand

COOLING WATER TREATMENT

Due to their design and operation, cooling towers provide, in the absence of preventive measures, certain conditions favouring the proliferation of Legionella infections and their dissemination in the air. The treatment programme provided by PERMO fights against the scaling, corrosion and bacterial development phenomena which directly or indirectly increase the risks of Legionella bacteria proliferation.

BWT name	BWT Code	Packaging	Delivery days
	P0008307BWT	25 kg	14
BWT CS-3015	P0008308BWT	250 kg	14
	P0008309BWT	1000 kg	14
	P0008100BWT	25 kg	14
BWT CS-3008	P0008101BWT	250 kg	31**
	P0008102BWT	1000 kg	31**
	P0008119BWT	10 kg	31**
BWT	B0007342	20 kg	14
CS-3001	B0007343	200 kg	14
	B0007344	1000 kg	14
	P0008104BWT	20 kg	14
BWT CS-3007	P0008105BWT	200 kg	31**
	P0008106BWT	1000 kg	31**
	P0008311BWT	25 kg	31**
BWT CS-3013	P0008312BWT	250 kg	31**
	P0008313BWT	1400 kg	14
	P0008123BWT	10 kg	31**
BWT	P0007274	20 kg	14
CS-3005	P0007101BWT	200 kg	31**
	P0007102BWT	1000 kg	31**

^{**}On demand







FORMULATED PRODUCTS







COOLING WATER TREATMENT

The BWT PERMO approach to the legionella risk uses the recommendations of the "Legionella and air cooling towers" good practice guide and takes into account the whole of order 2921 of 13 December 2004. This approach has been approved by the BWT PERMO HSQE and Formulated Products Department and is applied by all our operators throughout France.

BWT name	BWT Code	Packaging	Delivery days
DV4T CC 2010	P0008581BWT	10 kg	14
BWT CS-3012	P0008580BWT	20 kg	14
	B0007345	25 kg	14
BWT CS-3002	B0007346	250 kg	14
	B0007347	1200 kg	14
DAT CC 2002	P0008411BWT	5 kg	31**
BWT CS-3003	P0008412BWT	20 kg	14
	B0007336	25 kg	14
BWT CS-2001	B0007337	250 kg	14
	B0007338	1000 kg	14
	P0008500BWT	25 kg	14
BWT CS-1005	P0008501BWT	250 kg	14
	P0008502BWT	1200 kg	31**
BWT CS-4002	P0008152BWT	20 kg	14
	P0008437BWT	25 kg	14
BWT CS-1007	P0008438BWT	250 kg	14
	P0008439BWT	1200 kg	31**
	B0007333	20 kg	14
BWT CS-1003	B0007334	250 kg	14
	B0007335	1200 kg	14
	P0008180BWT	20 kg	14
BWT CS-1006	P0008181BWT	200 kg	14
	P0008182BWT	1000 kg	31**
	P0007390BWT	20 kg	14
BWT CS-1001	P0007391BWT	200 kg	14
	P0007392BWT	1000 kg	14
	P0008195BWT	20 kg	14
BWT CS-1002	P0008196BWT	200 kg	14
	P0008197BWT	1000 kg	14

**On demand

BOILER WATER TREATMENT

Even water pre-treated by reverse osmosis is unsuitable for feeding a steam generator. There are three main issues: priming, scaling and corrosion. So the protection of boilers and systems requires:

- the reduction of dissolved oxygen
- the creation of an insoluble protective film,
- the dispersal of deposits

	BWT name	BWT Code	Packaging	Delivery days
		P0007120BWT	20 kg	14
COP	BWT SH-2005	P0007121BWT	200 kg	14
		P0007122BWT	1000 kg	14
	BWT	P5440001BWT	20 kg	14
afssa	SH-7006	P5440000BWT	200 kg	31**
T minute in the		P0007180BWT	20 kg	14
	BWT SH-7007	P0007181BWT	200 kg	14
2013023		P0007182BWT	1000 kg	14
	BWT	P5440051BWT	20 kg	14
	SH-1015	P5440052BWT	200 kg	14**
		P0007237BWT	20 kg	14
	BWT SH-2008	P0007238BWT	200 kg	14
		P0007239BWT	1000 kg	31**
		P0007260BWT	20 kg	14
	BWT SH-7012	P0007261BWT	200 g	31
		P0007262BWT	1000 kg	31
Cok	BWT	P0007291BWT	20 kg	14
6	SH-7005	P0007292BWT	200 kg	31**
P	ERMO GVA 40	P0007040	20 kg	14
1 / 2 3	BWT	P0007226BWT	25 kg	14
alsa	F SH-1013	P0007227BWT	200 kg	14
		P0007245BWT	25 kg	14
	BWT SH-1003	P0007246BWT	250 kg	14
	,	P0007247BWT	1200 kg	14
	BWT	P0007130BWT	20 kg	14
	SH-2006	P0007131BWT	200 kg	14
		P5440097BWT	20 kg	31**
FOR	BWT SH-2003	P5440098BWT	200 kg	31**
elised ****		P5440099BWT	1000 kg	31**

^{**}On demand







FORMULATED PRODUCTS







BOILER WATER TREATMENT

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- the dispersal of deposits

BWT name	BWT Code	Packaging	Delivery days
<u> </u>	P0008000BWT	25 kg	14
BWT SH-2002	P0008001BWT	250 kg	14
(SOF)	P0008002BWT	1000 kg	14
	P0008030BWT	25 kg	14
BWT SH-1009	P0008031BWT	250 kg	14
Triver.	P0008032BWT	1200 kg	31**
<u> </u>	P0007211BWT	25 kg	31**
BWT SH-1012	P0007212BWT	250 kg	31**
	P0007213BWT	1000 kg	31**
	P0008040BWT	25 kg	14
BWT SH-1002	P0008041BWT	250 kg	14
400	P0008042BWT	1200 kg	14
	P0007206BWT	25 kg	14
BWT SH-1011	P0007207BWT	250 kg	14
FOR	P0007208BWT	1200 kg	14
	P0007165BWT	20 kg	14
BWT SH-1014	P0007166BWT	200 kg	14
	P0007167BWT	1000 kg	14
	P0008221BWT	25 kg	14
BWT SH-1018	P0008222BWT	200 kg	14
,	P0008223BWT	1000 kg	31**
	P0008216BWT	20 kg	31**
BWT SH-1022	P0008217BWT	200 kg	31**
	P0008218BWT	1000 kg	14
	P0008206BWT	25 kg	14
BWT SH-1016	P0008207BWT	250 kg	14
	P0008208BWT	1200 kg	31**

**On demand

BOILER WATER TREATMENT

Even water pre-treated by reverse osmosis is unsuitable for feeding a steam generator. There are three main issues: priming, scaling and corrosion. So the protection of boilers and systems requires:

- the reduction of dissolved oxygen
- the creation of an insoluble protective film,
- the dispersal of deposits

BWT name	BWT code	Packaging	Delivery days
	P0008350BWT	20 kg	14
BWT SH-2007	P0008351BWT	200 kg	31**
	P0008352BWT	1000 kg	31**
	P0008487BWT	20 kg	14
BWT SH-7009	P0008488BWT	200 kg	14
311-700-7	P0008489BWT	1000 kg	14
5	P0008047BWT	25 kg	14
BWT SH-7001	P0008048BWT	250 kg	14
(cot)	P0008049BWT	1200 kg	14
5	P0008020BWT	25 kg	14
BWT SH-2004	P0008021BWT	250 kg	14
(SOR)	P0008022BWT	1200 kg	14
	B0007315	25 kg	14
BWT iH-2001	B0007316	250 kg	14
	B0007317	1200 kg	14
	P0008080BWT	25 kg	14
BWT iH-1010	P0008081BWT	250 kg	14
*tour	P0008082BWT	1200 kg	14
	B0007300	25 kg	14
BWT H-1001	B0007301	250 kg	14
Personal Communication of the	B0007302	1200 kg	14
	P0008202BWT	20 kg	14
BWT iH-7003	P0008203BWT	200 kg	14
found.	P0008204BWT	1000 kg	31**
	B0007321	20 kg	14
BWT SH-7002	B0007322	200 kg	31**
-state	B0007323	1000 kg	31**

BWT SH-700







RAW AND WASTE WATER TREATMENT

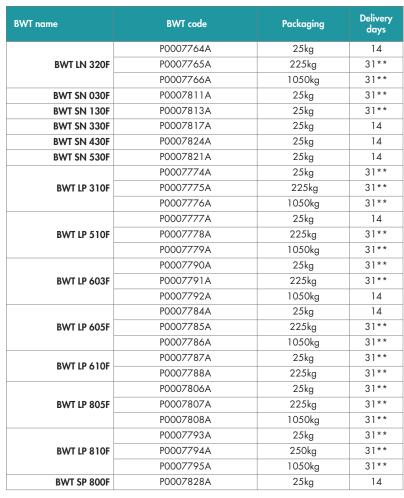




BTW PERMO offers a wide range of chemicals to meet its customers expectations in different applications:

- Capture of suspended matter and colloids.
- COD reduction.
- Reduction of nitrogen and phosphorous pollutions and other industrial sub-product pollutions.
- Sludge dewatering chemicals.
- Detox treatment (heavy metals, fluoride removal...).
- Innovative chemicals with a very low environmental impact.

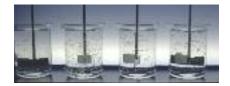






BWT name	BWT code	Packaging	Delivery days
BWT PRO AM	P0008527A	25 kg	14
DWI PRO AM	P0008528	200 kg	14
BWT AM 5	P0008735	20 kg	31**
BWI AM 5	P0008736	170 kg	14
	P0008747	20 kg	14
BWT AM 7	P0008748	190 kg	14
	P0008746	900 kg	31**

**On demand







RAW AND WASTE WATER TREATMENT

Coagulants

BWT name	BWT code	Packaging	Delivery days
	P0007614A	20 kg	31**
BWT CM 114	P0007615A	200 kg	31**
	P0007616	1000 kg	31**
	P0007611A	20 kg	14
BWT CM 208	P0007612	200 kg	14
	P0007613	1000 kg	31**
	P0007631	25 kg	14
BWT CM 217	P0007632	250 kg	14
	P0007633	1200 kg	14
	P0007717	25 kg	31**
BWT COM 28	P0007718	250 kg	31**
	P0007719	1200 kg	31**
	P0007710	25 kg	31**
BWT CO 41	P0007711	250 kg	31**
,	P0007712	1200 kg	31**
	P0008712	25 kg	14
BWT AML 2	P0008713	250 kg	31**
	P0008714	1200 kg	31**
BWT DESO - H2S	P0007929	25 kg	31**









Biological Waste Water Enhancer

To enhance biological treatment on waste water, BWT PERMO offer specific solution:

BWT	name	BWT code	Packaging	Delivery days
₩ E	BWT BACTER DAIRY	P0007887	10 kg	14
1	BWT BACTER CHEM	P0007888	10 kg	14
V	BWT BACTER HC	P0007889	10 kg	14
V	BWT BACTER N	P0007892	10 kg	31**
	BWT BACTER GT	P0007884	4 x 4 kg	31**
		P0007885	20 kg	31**
	BWT NUTRI-STEP	P0007898	22 kg	31**
	DWI NOIKI-SIEP	P0007899	220 kg	31**

^{**}On demand

GENERAL TERMS AND CONDITIONS OF SALES

1. General

- 1.1-The present general business terms and conditions apply to allongoing contractual and pre-contractual relations between BWTFrance and its customers over and above the special terms and conditions that might have been concluded between the two.
- 1.2 Any derogation to the present general terms and conditions must be explicitly accepted in writing by ourselves.
- 1.3 Documents, catalogues, advertising material and prices not explicitly mentioned in the special terms and conditions are provided as a guide only and cannot bind us.

2. Contract formation

2.1 - Placing an order

The formation of a contract depends wholly on the explicit, written acceptance of the order by BWT France.

Acceptance of our offers or estimates by the customer implies their agreement with the present terms and conditions.

Any order of a total of less than 150 € H.T. will be increased by ma-nagement administrative costs of the sum of 15 €.

Except where otherwise stipulated, offers and estimates remain valid for a period of one month from the date of their mailing.

2.2 - Modifications to contract

The order includes precisely and only the equipment specified in the estimate.

For additional supplies, prices and new deadlines are specifically negotiated between BWT France and the Customer. In no case whatsoever can the terms and conditions for additional supplies be prejudicial to the main order supplies.

Any modification of orders or contracts requested by customers is subject to our explicit and prior acceptation and must be set out in an additional clause.

2.3 - Cancellation

The order expresses the Customer's irrevocable consent; they can-not therefore cancel it except in the case of our prior and explicit agreement. In that case, the Customer shall indemnify us for all costs incurred and for any direct or indirect consequences resulting therefrom. In all cases, the lump sums and payments already paid to us shall be deemed our entitlement.

3. Characteristics and status of ordered products

Products delivered comply with the technical regulations applicable to them and to those technical standards for which we have expli-citly declared the compliance of the product.

We reserve the right at any time to make any modifications with respect to layout, shape, dimensions or material to our devices, machines and machine elements described in our catalogues or brochures.

Safety data sheets for chemical products are available on Internet site: www.msds-sys.net. You can consult them on line or have them forwarded to you by fax or email. The NAME is your supplier's, the search is achieved by the product code or a part of its designation.

The customer is responsible for operating the product under the operating conditions set out in the specification sheet and in compliance with current safety and environment laws applicable at the site of operations and with acknowledged rules of technology in their activity. It is incumbent on the Customer to draw up a specification sheet appropriate to their technical requirements and if ne-cessary to make sure of the appropriateness of the product for the planned application.

4. Intellectual ownership and know-how of products and docu-ments

All intellectual property rights in delivered products and in performed works, along with know-how incorporated in the forwarded do-cuments, remain our exclusive property.

5. Delivery, carriage, verification of products

5.1 - Delivery terms and conditions

Except where otherwise stated, supplies are considered to be de-livered on an ex-works or ex-warehouse basis. The delivery is made, either by direct forwarding to the customer, by notice of avai-lability-for-collection, by delivery in our plants or warehouses to a forwarding agent or carrier designated by the customer or failing that designation, one selected by BWT France.

Where the Customer has ordered the carriage and accepts the cost thereof, the Customer shall bear the cost of all pecuniary consequences of any direct action taken against us by the carrier.

In the event of the Customer not taking delivery, without recourse to an injunction, the latter shall bear the cost of, and accept the risks for, the storage of the supplies. In spite of that, dates of payment planned from the outset cannot be postponed.

5.2 - Delivery deadlines

The agreed delivery deadline is an important item to be specified in the contract as well as its characteristics (availability date, acceptance submission deadline, delivery deadline, legal acceptance deadline, etc.). The stipulated deadlines are however given as a guide only and can be questioned where circumstances out of our control occur such as are defined in article 6. Delays can under no circumstances whatsoever justify the cancellation of an order or contract.

Delivery deadlines run from the latest of the following dates: the date of the acknowledgement of receipt of the order, the date on which BWT France received information, down payment or supplies that the customer had undertaken to forward.

5.3 - Carriage - customs clearance - insurance

The Customer is responsible for, and bears the cost of, all carriage, insurance, handling and on-site delivery operations, and it is incum-bent on them to check consignments on arrival and if necessary make reservations against the carrier, even if the consignment was carriage paid.

Where responsibility for carriage is ours, shipping terms are carriage due at the lowest possible rate, except where otherwise requested by the Customer, in which case any additional costs shall be passed on to the Customer.

6. Case of Force majeure

Neither of the parties of the present contract can be held responsi-ble for their delay or failure to perform any of the obligations under which they are bound with respect to the contract if that delay or fai-lure results from the direct of indirect effect of any case of force ma-jeure in the sense wider than that understood by French jurisprudence, such as:

-occurrence of a natural disaster

-earthquake, storm, fire, floods, etc

- conflicts, war, attacks

-labour dispute, full or partial strike at the Supplier's or the Customer's

-labour dispute, full or partial strike at the suppliers', service providers', hauliers', postal or public services, etc

-mandatory injunction by public authorities (import prohibition, em-bargo)

- work accidents, broken machines, explosions

7. Pricing

Our prices are those in force at the time of confirmation of the order.

They are drawn up in Euros, excluding customs duties, packed and ex-our main warehouse, except where special provisions are stipu-lated in the contract. They are invoiced according to the terms and conditions of the contract.

For export orders, our prices are quoted ex-works Saint-Denis. Possible discounts are set out in the special terms and conditions of sale specific to the market segment in question such as were set out or likely to be at the request of the Customer.

Prices correspond exclusively with the products and services spe-cified in the offer

8. Payment

8.1 - Methods of payment

Payment terms and conditions are determined according to special terms and conditions. However, payments shall be made at the la-test on the 60th day following issue of our invoice.

In the case of deferred payment or by installments, only the settlement of the payment at the agreed date constitutes payment, the mere handing over of a commercial paper or cheque does not do so. The payment by cheque of a down payment of 30 % could be requested of the purchaser in the case of a big order. In the case of off-invoice discount for anticipated payment, (limited to 0.5 % per month) the sum of the deductible VAT must be redu-ced by the sum of the VAT pertaining to the discount. In the case of payment by draft, the latter must be returned with acceptance within 7 days of its mailing.

8.2 - Late payment

Any late payment shall generate the application of late payment in-terest amounting to three times the legal interest rate. Lateness of payment at any due date will result in the forfeiture of the contractual installments, all due sums becoming immediately payable.

8.3 - Payment compensation

The Customer undertakes not to conduct any illegal ex-officio debiting or crediting, not to invoice us any amount that would not have been explicitly recognized by BWT France by way of liability.

Any ex officio debit will constitute an unsettled account and shall give rise to the application of provisions in article 8.2 dealing with

late payments. However, the parties reserve the right to have recourse to legal or contractual compensation for debt.

8.4 - Reservation of title - Risk transfer

We retain full ownership of assets forming the subject of the contract up to the effective payment of the full price of the main order and accessories. Default of payment at any one of the dates of payment could lead to a claim for those assets. Neverthe-less, as from the delivery date, the Customer assumes the risk for the loss of, or deterioration to, those assets along with the liability for damages they could result in.

In the event of exercising that claim, the advance payments that will already have been paid will be retained definitively by BWT France by way of indemnity, without prejudice to the possibility of their obtaining full compensation for the harm caused to the company.

9. Warranty and Liability

9.1 - Warranty

We undertake to correct any functional fault derived from a fault in design, materials or performance (including assembly if that operation is assigned to us), within the limits of the provisions help.

Our obligation is not applicable in the case of a fault arising either from materials supplied by the Customer or by a design imposed by the latter.

Our warranty is limited to the repair and replacement on site or on our premises of the product or element acknowledged as being faulty. Possible carriage costs are borne by the Customer. That commitment, except where otherwise specifically stated, only applies to faults that become apparent during a period of one year (warranty period).

Faults and deterioration caused by incorrect assembly or handling, faulty maintenance, abnormal use or unplanned modifications are excluded from this warranty.

Replacement parts or repairs resulting in abnormal wear of the equipment, in deterioration or accidents caused by negligence, su-pervision or routine maintenance faults and faulty use of the equip-ment are also excluded from warranty cover.

In order to be able to benefit from those provisions, the Customer must immediately advise us in writing of the faults they attribute to the equipment and must provide all necessary documentary sup-port to prove those claims. They must allow us all facilities to pro-ceed with the verification of those faults and in order to correct them; furthermore they must refrain, except with our explicit consent, from carrying out the repair themselves or having it carried out by a third person.

The warranty period runs from the date of delivery within the mea-ning of Article 5.2 above.

9.2 - Limits of Supplier liability

Our liability shall be limited to material damage directly suffered by the Customer resulting from faults attributable to us for the perfor-mance of the contract.

Under no circumstances whatsoever, shall we be bound to compensate for immaterial or indirect damage such as: operating losses, profit losses, opportunity losses, commercial harm, loss of earnings.

10. Insurance policies

Since risk by explicit agreement is transferred to the Customer at delivery within the meaning of article 8.4, they undertake, from that time, to take out an insurance policy covering the equipment. We could at any time, request certificates for those guarantees of the Customer.

11. Dispute

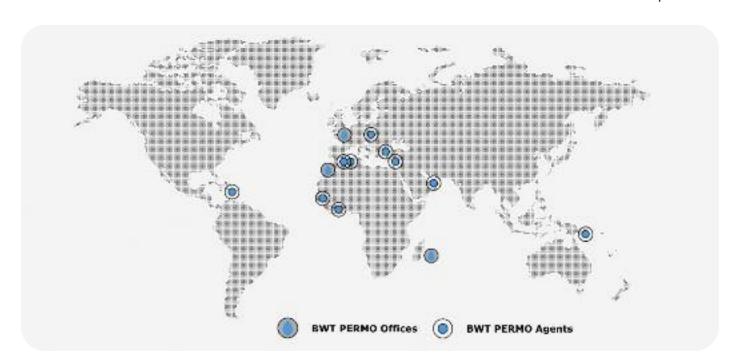
The parties undertake to attempt to settle their differences out of court before referring to the competent court.

Failing out of court agreements, any disputes relative to the perfor-mance or interpretation of the present general sale terms and conditions shall fall within the exclusive competence of the Bobigny courts, even in cases of appeal and those involving more than one defendant and only French law shall be applicable.

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