PRODUCT CATALOG

ENERGY WATER

energy water®
environmental product

Energywater

t's not just a name. It's a team of experets in physics, electrochemistry, environmental engineering. In cooperation with heating technology engineers and experts in pumping technology, after several years of work, we have designed a product - an installation element that helps solve limescale problems in water supply systems

MWD - MINERAL WATER DOCTOR

Our Inspiration comes from the published theories and from the latest findings in galvanic water treatment

When designing our products, we considered all the hygienic codes of practice for materials and their use in drinking water and after performing a number of tests that confirmed the functionality of the MWD, we gradually upgraded its construction and, according to the latest knowledge and research, found new possibilities of applying the MWD product

The affordability of our products is obvious in order to make this new technology of water treatment that meets all the criteria of environmentally friendly product aviable to the general public. Our mission is a satisfied customer and the intact state of planet's water resources for future generations

We have protected by trademark all our new constructional and technological knowledge from the area of galvanic water treatment so that you always get only the original product

We believe this product catalog will help you solve a number of unrealized water treatment installations where the main problem was the excessive sedimentation of limescale in piping systems and appliances whereas customers did not want to change the hardness and chemical composition of water. For more information about our company's new products that are not contained in this product catalog, please visit our website www.energywater.com.

WE WISH YOU A LOT OF SUCCESS WITH OUR PRODUCTS!
YOUR ENERGYWATER TEAM

ENERGYWATER - MWD

Reliable solution to prevent limescale build-up.

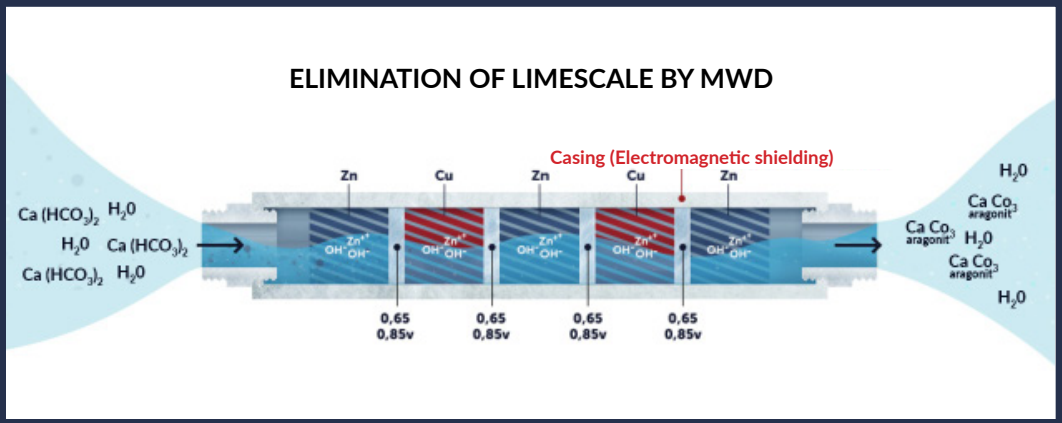
(Mineral Water Doctor) works on the electrochemical principle when, during the water flow through the device, the potential difference in water is 0.7-1 Volt. In addition, free zinc ions are released from titanium-zinc anode into the water.Calcium dissolved in water (Ca^{+2}), which is the main reason of sedimentation build-up in waterpipes and heat exchangers, is found in water as calcium hydrogen carbonate

Due to the hydrodynamics of water and the change in water temperature, calcium bicarbonate decomposes to carbon dioxide and poorly soluble calcium carbonate (calcite). The calcite dissolves in water to CO_3 and Ca^{+2}. Anion CO_3 binds to Zn^{+2} zinc cations to give zinc carbonate $ZnCO_3$. Calcium $CaCO_3$ crystallizing in the trigonal system produces aragonite $CaCO_3$, crystallizing in a rhombic system. Aragonite is not sedimenting and folows with water out of the water systems.

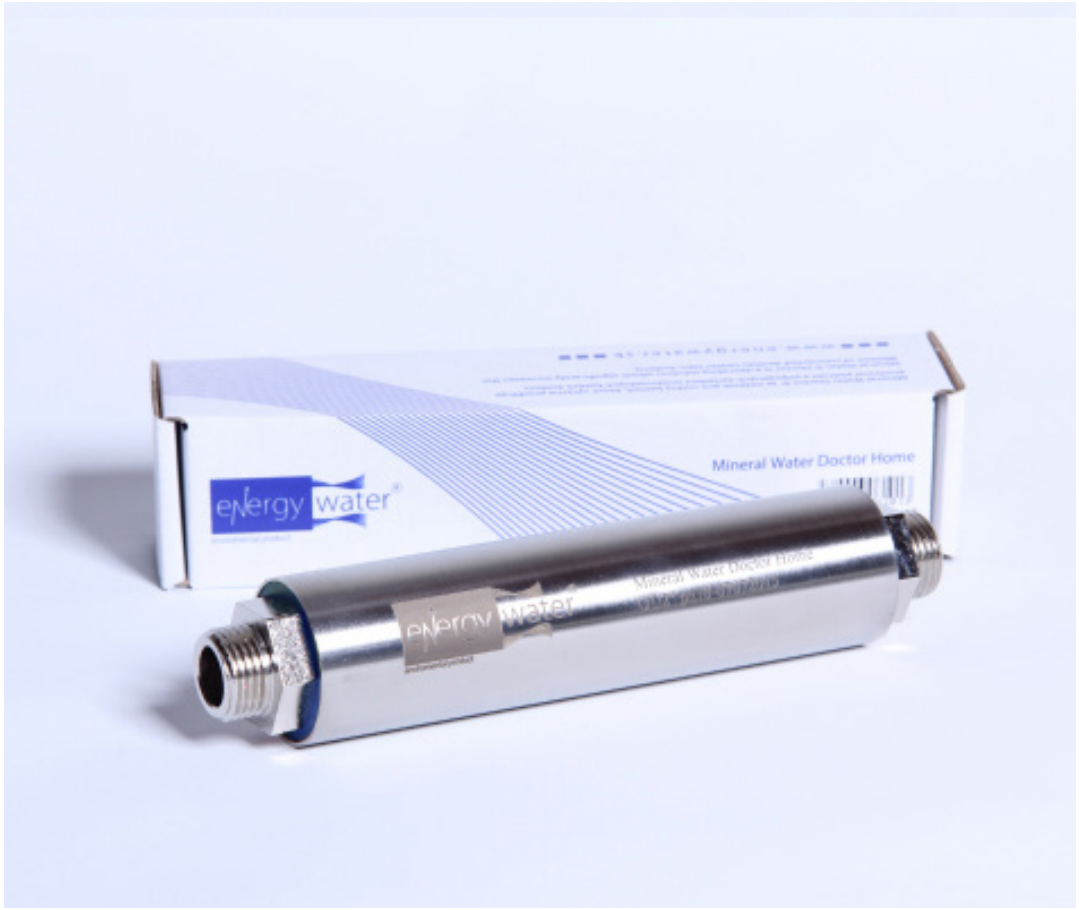
Galvanic Water Treatment The MWD

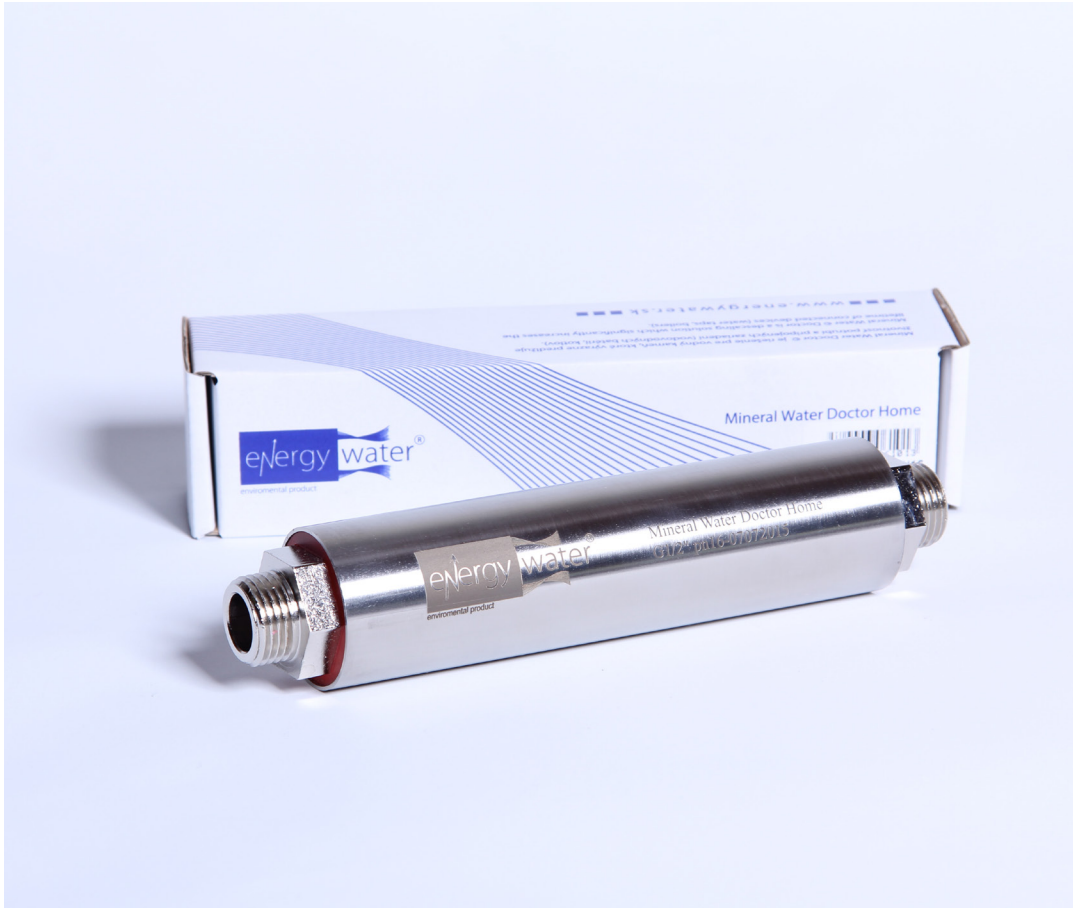
For the correct name of this water treatment technology, it would be better to use physical or electrolytic water treatment. This means that the electrochemical reactions resulting from the action of the cathode and the anodes placed in the electrolyte change the structure of the minerals contained in the water. Elimination of limescale, especially Ca and Mg, is of interest to people because of energy savings and extended lifetime of water pipes and appliances using water, while preserving all the qualities of healthy drinking water.

This is only possible if the galvanic treatment product is suitably manufactured. Our product MWD - Mineral Water The doctor fulfills these conditions. During further water transport Aragonite has also s grinding effect on existing limescale already sedimented in waterpipe due to water flow. Free zinc anions have a tendency to associate with already established cationic calcium and thus precipitate calcium and calcium compounds from the water system. Another positive effect is the conversion of surface oxidized metal layers by zinc reduction reactions. Existing limescale and rust are finely degraded in microscopic amounts and are leached from the system as a solution. After removing the deposits of the limescale, a protective anticorrosion layer is gradually formed on the surface of the pipe - magnetite, which results in the stopping of further corrosion of the system



The lifetime of the MWD is determined by the hardness of the water, the CO concentration in water and the pH of the water. With an excessively high water hardness and acidity below 6.5, the zinc anode is degraded faster, thereby the lifetime of the instrument is reduced.

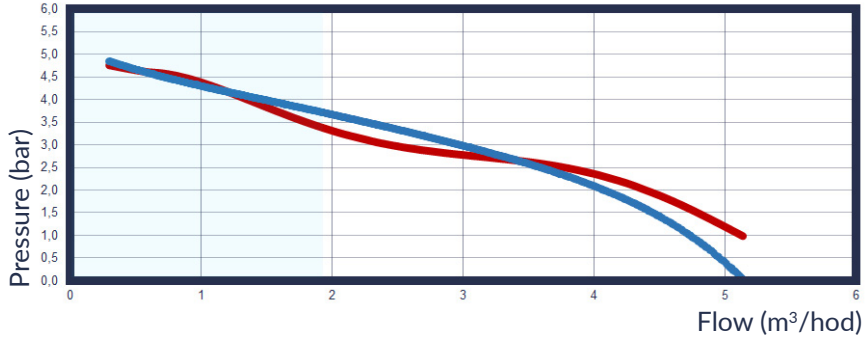




OPERATING CHARAKTERISTIC:

p^1 in front MWD
p^2 behind MWD

MWD 1/2" - MIN. PRESSURE LOSS



DIAMETER G1/2"

- Small apartment units (self-supplied hot and cold water).
- End appliances (washing machines, dishwashers, coffee machines, coffee automats, drink fountains, etc.).
- Flowing electric water heaters, irrigation for greenhouses, animal breedings.
- Automatic filling machines for heating systems.
- The device is suitable for water flow rates of 0.9 m^3/h, replacement of the device after 1200 m^3 of flowing (flow-through) water

MWD – HOME G1/2"

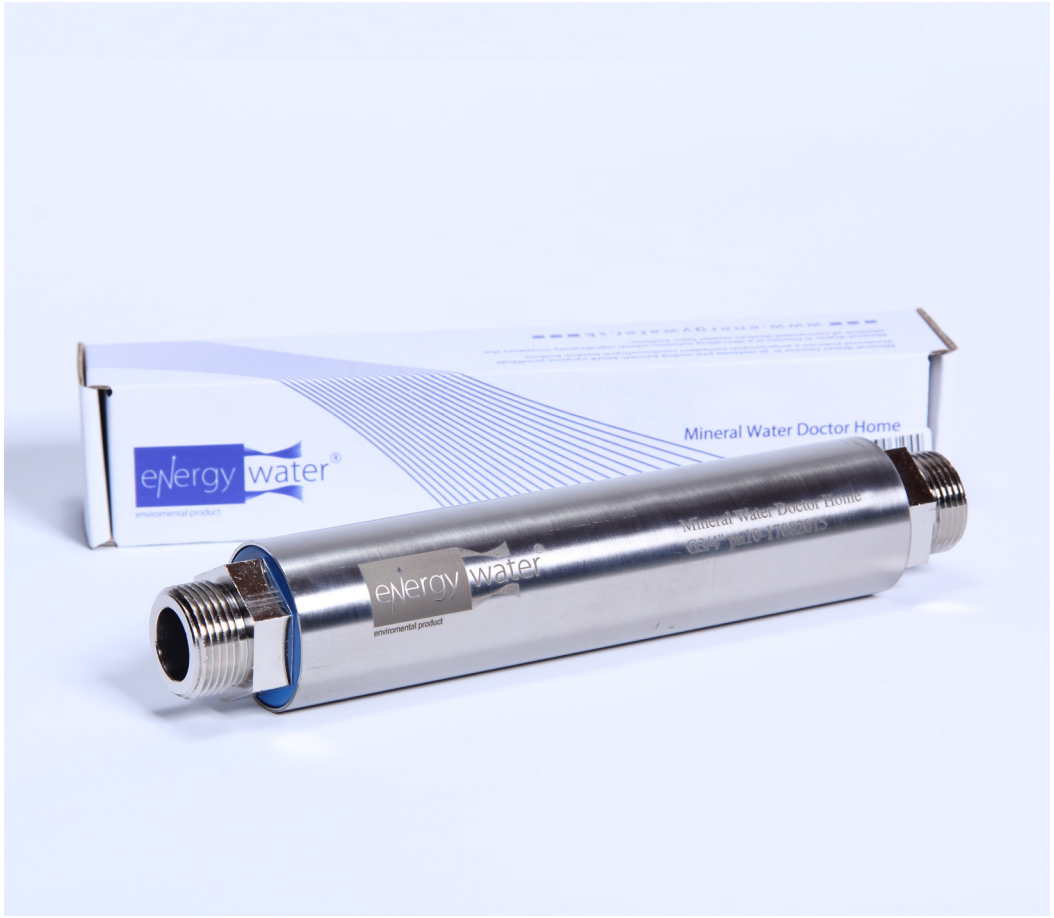
cold water (max. **pressure**: 10 bar = 1000 kPa = 1 MPa; max. do 45 °C)

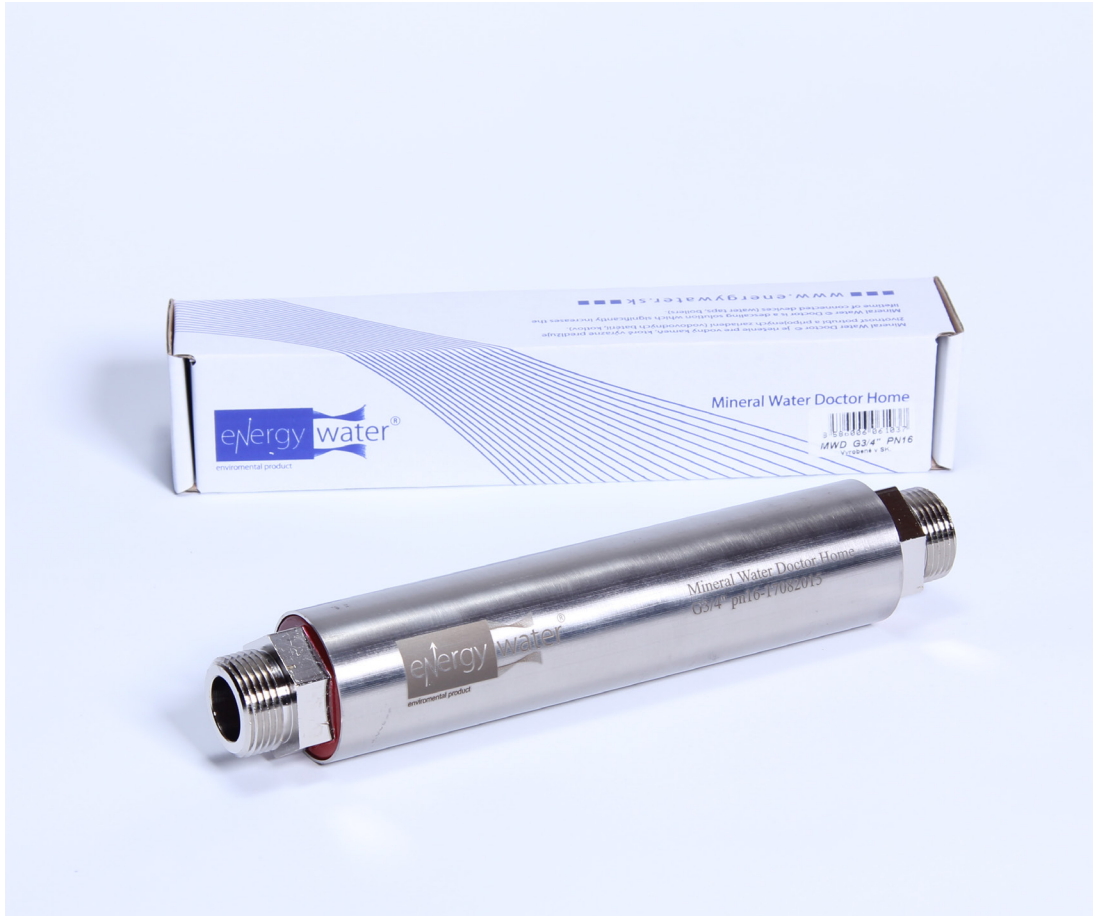
LENGT - A	WIDTH - B	NOMINAL FLOW RATE m^3/h		LIFETIME OF DEVICE	TOTAL WEIGHT	PRESSURE RANGE	WATER TEMPERATURE
mm	mm	min.	max.	m^3	kg	bar	^0C
185	38	0,003	0,9	1200	0,41	10	45

MWD – HOME TERMO G1/2"

hot water (max. **pressure**: 16 bar = 1600 kPa = 1,6 MPa; max. do 95 °C)

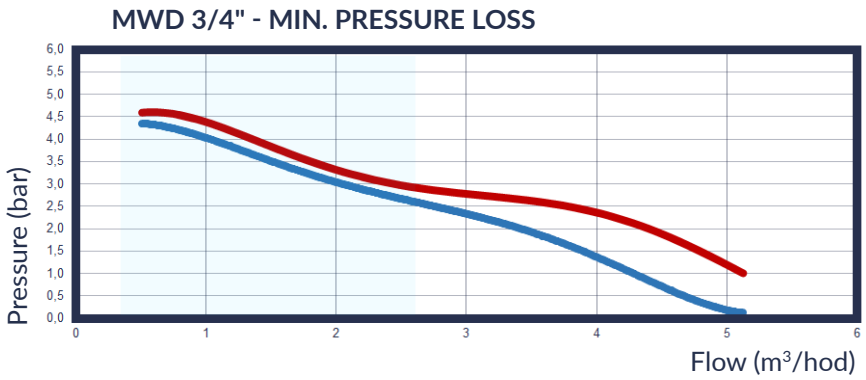
LENGT - A	WIDTH - B	NOMINAL FLOW RATE m^3/h		LIFETIME OF DEVICE	TOTAL WEIGHT	PRESSURE RANGE	WATER TEMPERATURE
mm	mm	min.	max.	m^3	kg	bar	^0C
185	38	0,003	0,9	1200	0,41	16	95





OPERATING CHARAKTERISTIC:

p^1 in front MWD
p^2 behind MWD



DIAMETER G3/4"

- Block of flats with multiple outlets (separately supplied with hot and cold water).
- Homes with own hot water preparation (flow or storage system), small refreshment stations, ice cream, cafes, chocolate and tea shops.
- Facilities with toilets (urinals, automatic flushing toilets).
- Hairdressing
- Heating circuits.
- The device is suitable for water flows at 1.2 m^3/h, replacement of the device after 1500 m^3 of flowing water.

MWD – HOME G3/4"

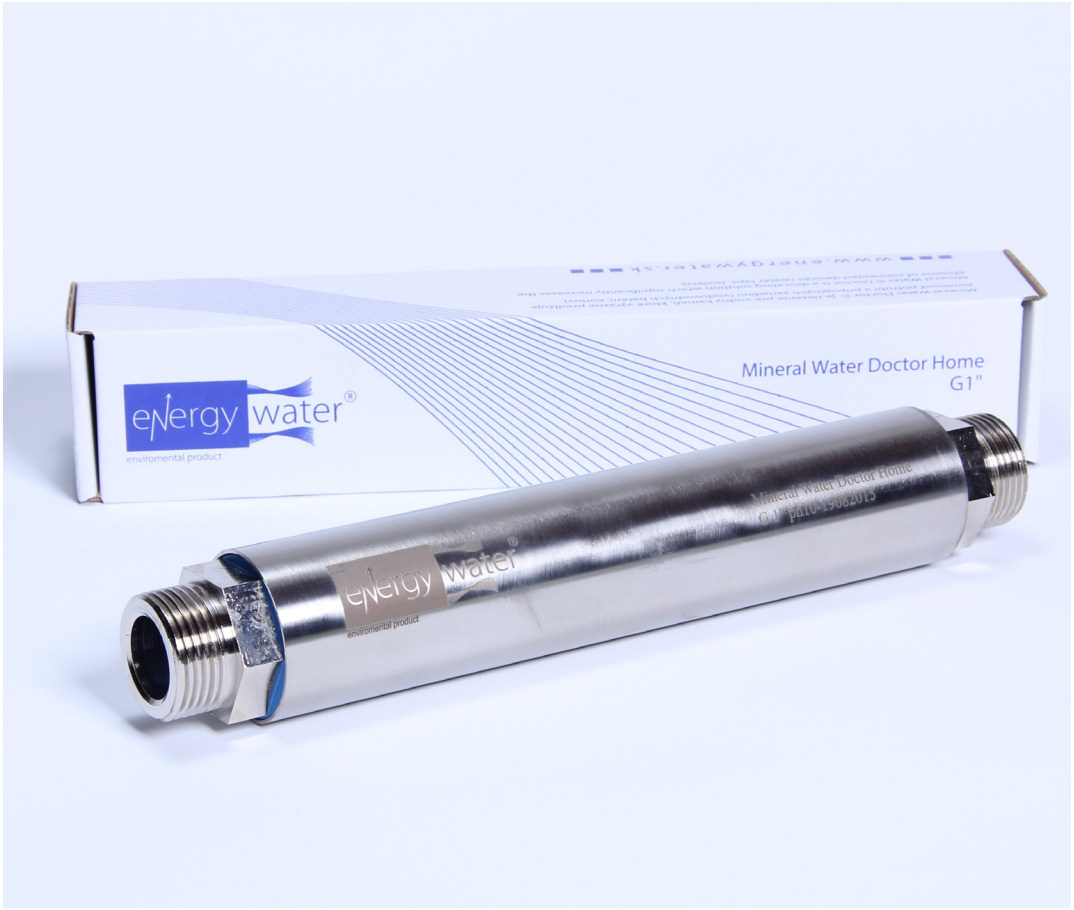
cold water (max. **pressure**: 10 bar = 1000 kPa = 1 MPa; max. do 45 °C)

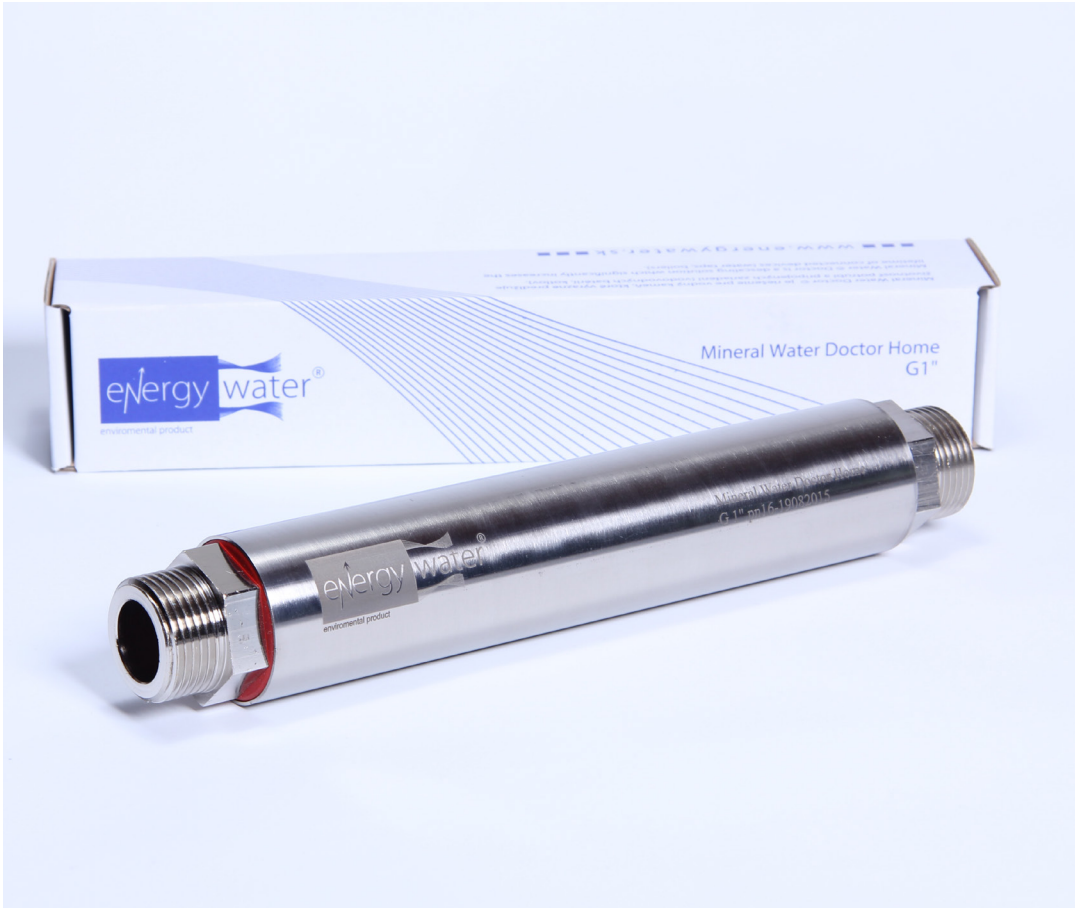
LENGT - A	WIDTH - B	NOMINAL FLOW RATE m^3/h		LIFETIME OF DEVICE	TOTAL WEIGHT	PRESSURE RANGE	WATER TEMPERATURE
mm	mm	min.	max.	m^3	kg	bar	^{0}C
215	40	0,003	1,2	1500	0,54	10	45

MWD – HOME TERMO G3/4"

hot water (max. **pressure**: 16 bar = 1600 kPa = 1,6 MPa; max. do 95 °C)

LENGT - A	WIDTH - B	NOMINAL FLOW RATE m^3/h		LIFETIME OF DEVICE	TOTAL WEIGHT	PRESSURE RANGE	WATER TEMPERATURE
mm	mm	min.	max.	m^3	kg	bar	^{0}C
215	40	0,003	1,2	1500	0,54	16	95

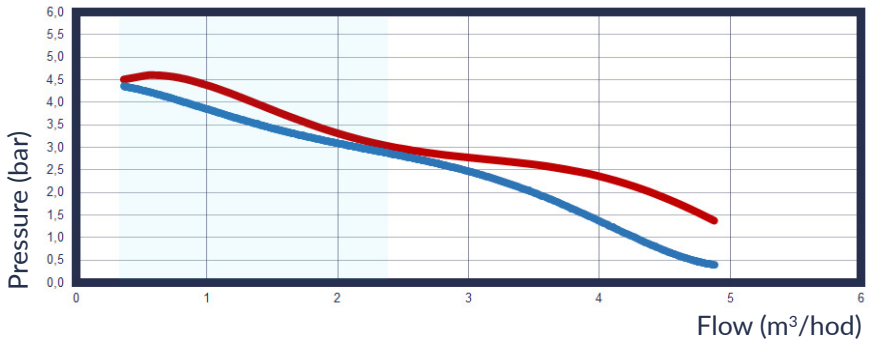




OPERATING CHARAKTERISTIC:

p^1 in front MWD
p^2 behind MWD

MWD 1" - MIN. PRESSURE LOSS



DIAMETER G1"

- Family houses and apartments with multiple outlets and own hot water preparation.
- Schools, kindergardens, smaller administrative buildings. House waterworks.
- Loundries.
- Restaurant facilities.
- Automatic car wash lines.
- Irrigation systems and irrigation of greenhouses.
- Animal breeding.
- The device is suitable for water flows at 2.5 m^3/h, in the plant's name after 3000 m^3 of flow water

MWD – HOME G1"

cold water (max. **pressure**: 10 bar = 1000 kPa = 1 MPa; max. do 45 °C)

LENGT - A	WIDTH - B	NOMINAL FLOW RATE m^3/h		LIFETIME OF DEVICE	TOTAL WEIGHT	PRESSURE RANGE	WATER TEMPERATURE
mm	mm	min.	max.	m^3	kg	bar	^0C
270	45	0,003	2,5	3000	0,85	10	45

MWD – HOME TERMO G1"

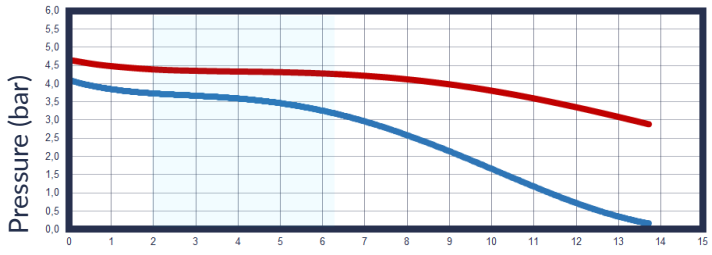
hot water (max. **pressure**: 16 bar = 1600 kPa = 1,6 MPa; max. do 95 °C)

LENGT - A	WIDTH - B	NOMINAL FLOW RATE m^3/h		LIFETIME OF DEVICE	TOTAL WEIGHT	PRESSURE RANGE	WATER TEMPERATURE
mm	mm	min.	max.	m^3	kg	bar	^0C
270	45	0,003	2,5	3000	0,85	16	95

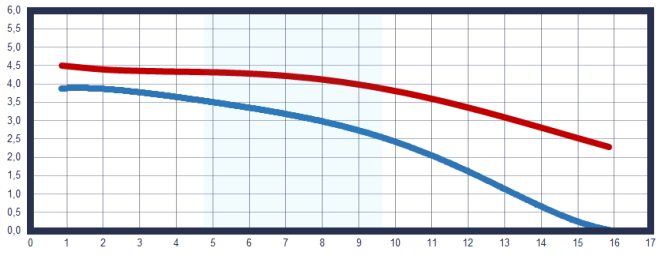
OPERATING CHARAKTERISTIC:

p^1 before MWD
p^2 after MWD

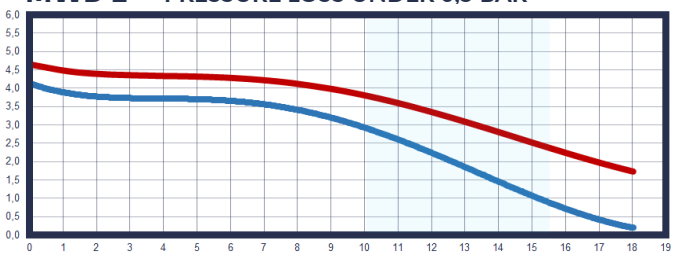
MWD G 1 ¼" - PRESSURE LOSS UNDER 0,5 BAR



MWD G 1 ½" - PRESSURE LOSS UNDER 0,5 BAR



MWD 2" - PRESSURE LOSS UNDER 0,5 BAR



MINERAL WATER DOCTOR INDUSTRY

MODEL	DIAMETER	LENGT - A	WIDTH - B	NOMINAL FLOW RATE m³/h		LIFETIME OF DEVICE	TOTAL WEIGHT	PRESSURE RANGE	WATER TEMPERATURE
		mm	mm	min.	max.	m³	kg	bar	°C
MWD Industry G5 / 4 "	G 5 / 4 "	457	70	0,003	5	8000	3,1	16	95
MWD Industry G5 / 4 " M	G 5 / 4 "	370	70	0,003	5	6000	3,7	16	95
MWD Industry G6 / 4 "	G 6 / 4 "	470	76,1	0,003	7	11000	3,7	16	95
MWD Industry G6 / 4 " M	G 6 / 4 "	380	76,1	0,003	7	8250	2,80	16	95
MWD Industry G2"	G 2 "	480	88,9	0,003	10	18000	4,5	16	95

Simple control system to determine the optimal maintenance interval in high reliability systems.

Cold water supply pipelines for technological purposes where monitoring of device efficiency is required

Prevention of fumigation of plate exchanders of compact transfet stations KOST tube heat exchangers.

Stabilization of the specific heat needs for HSW (hot service water). DHW domestic hot water

Stabilization of point corrosion of storage heaters and distribution systems in the CHS system.

Simple and efficient service of replaceable cartridges in systems with higher water flow

Cold water supply for water heating in the transfer stations and boiler room of the CHS (central heating supply)

solution for apartment houses and installations with higher water flow

Suitable for the primary water / water heat pump circuit.

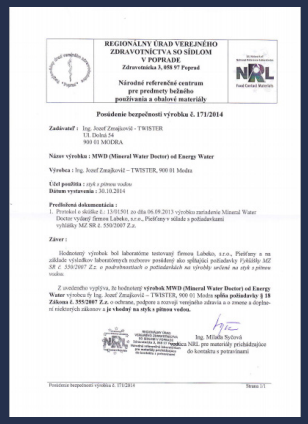
Robust construction and durability for operating load up to PN16 and 95°C

Stabilization of COP (Coefficient Of Performance, Performance Number) at manufacturer-guaranteed values

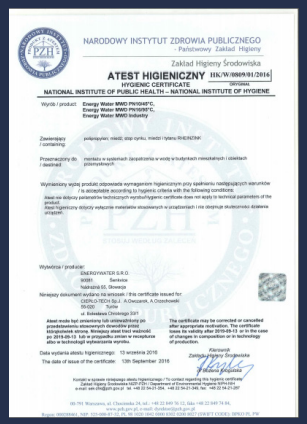




CERTIFIKATES:


REGIONÁLNY ÚRAD VEREJNÉHO ZDRAVOTNÍCTVA SO SÍDLOM V POPRADE
Zdravotnícka 3, 058 97 Poprad
Národné referenčné centrum pre predmety bežného používania a obalové materiály
Posúdenie bezpečnosti výrobku č. 173/2014
Žiadosť: Ing. Jozef Zmajkovič - TWISTER
Ul. Dolná 34
900 01 MODRA
Názov výrobku: MWD (Mineral Water Doctor) od Energy Water
Výrobca: Ing. Jozef Zmajkovič – TWISTER, 900 01 Modra
Účel použitia: styk s pitnou vodou
Dátum vystavenia: 30.10.2014
Preskúšaná dokumentácia:
1. Protokol o skúške č. 13/0301 zo dňa 06.09.2013 výrobku nerádzenia Mineral Water Doctor vyrábaný firmou Labeko, s.r.o., Piešťany v súlade s požiadavkami vyhlášky MZ SR č. 550/2007 Z.z.
Záver:
Hodnotený výrobok bol laboratórne testovaný firmou Labeko, s.r.o., Piešťany a na základe výsledkov laboratórnych rozborov posúdený ako spĺňajúci požiadavky Vyhlášky MZ SR č. 550/2007 Z.z. o podrobnostiach o požiadavkách na výrobky určené na styk s pitnou vodou.
Z uvedeného vyplýva, že hodnotený výrobok MWD (Mineral Water Doctor) od Energy Water výrobcu Ing. Jozef Zmajkovič – TWISTER, 900 01 Modra spĺňa požiadavky § 18 Zákona č. 355/2007 Z.z. o ochrane, podpore a rozvoji verejného zdravia a o zmene a doplnení niektorých zákonov a je vhodný na styk s pitnou vodou.
Ing. Mikuláš Sýkora
vedúci NRL pre materiály prichádzajúce do kontaktu s potravinami


Labeko, s.r.o.
Protokol o skúške č.: 13/0150/1


NARODOWY INSTYTUT ZDROWIA PUBLICZNEGO
Państwowy Zakład Higieny
Zakład Higieny Środowiska
ATEST HIGIENICZNY HK/W/0809/01/2016
HYGIENIC CERTIFICATE
NATIONAL INSTITUTE OF PUBLIC HEALTH – NATIONAL INSTITUTE OF HYGIENE
Wyrób / product: Energy Water MWD PW340TC, Energy Water MWD PW350TC, Energy Water MWD Industry
Zawierający / containing:
Przeznaczony do / destined:
Wymagany wpływ produkt odpowiada wymaganiom higienicznym przy spełnieniu następujących warunków / is acceptable according to hygienic criteria with the following conditions:
Wydano i podpisano / issued and signed:
ENERGYWATER S.R.O.
Nádražná 55, Slovacja
Niniejszy dokument wydano na wniosek / this certificate issued for:
ENERGYWATER S.R.O.
Nádražná 55, Slovacja
Data wydania atestu higienicznego / The date of issue of the certificate: 13th September 2016
Kierownik / Director
Zakładu Higieny Środowiska


МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
ДЕРЖАВНА САНІТАРНО-ЕПІДЕМІОЛОГІЧНА СЛУЖБА
ЗАТВЕРДЖУЮ
С.В. Протас
Висновок державної санітарно-епідеміологічної експертизи
№ 05.03.02-03/
Предмет гігієнічної обробки вода Energy Water MWD (Mineral Water Doctor)
Виготовитель


СИСТЕМА ДОБРОВОЛЬНОЙ СЕРТИФИКАЦИИ «ПРИБОР-ЭКСПЕРТ»
СЕРТИФИКАТ СООТВЕТСТВИЯ
ПЭ
№ 0000306
ПРОДУКЦИЯ
СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ НОРМАТИВНЫХ ДОКУМЕНТОВ
СЕРТИФИКАТ ВЫДАН
НА ОСНОВАНИИ
ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ


PUPIN

ENERGYWATER S.R.O. NÁDRAŽNÁ 55 ŠENKVICE

TEL. 00421903247007
ZMAJKOVIČ JOZEF

eNergy water®
environmental product

WWW.ENERGYWATER.SK
INFO@ENERGYWATER.SK