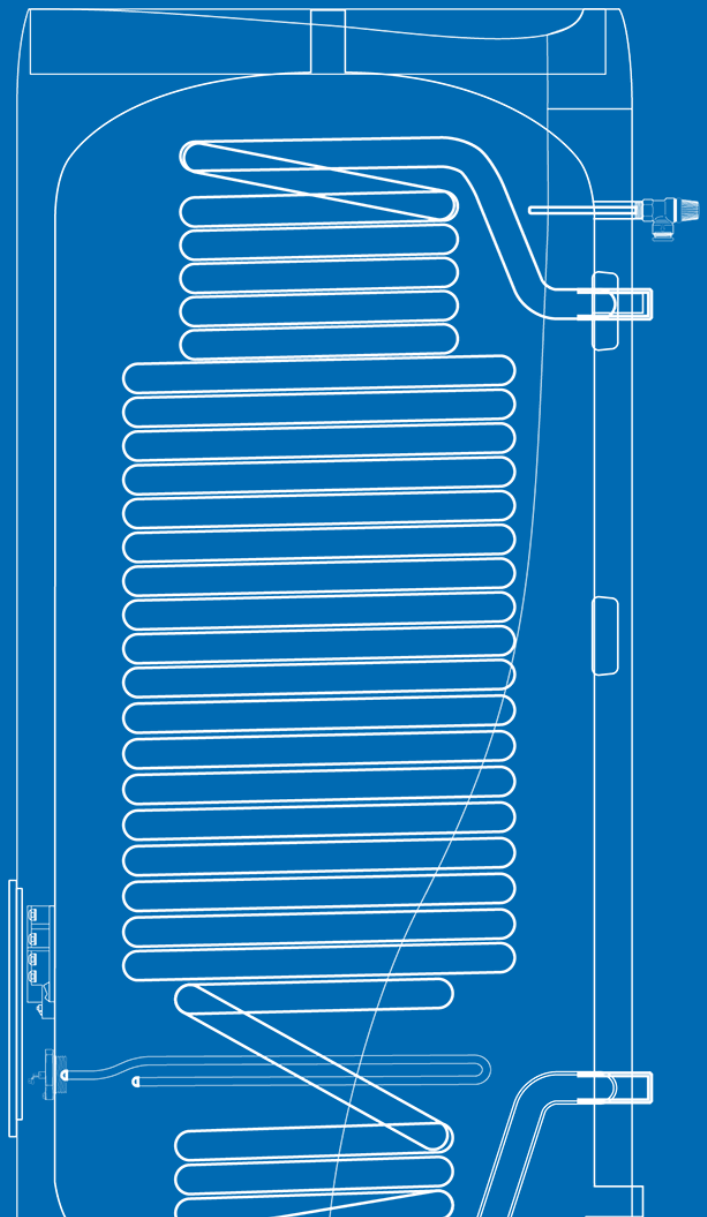
OSO HOTWATER

2023

Product catalogue
Water heaters



146004-09

KEY ADVANTAGES

Our stainless steel water heaters are in a class of its own when it comes to lifetime economy. Made in Norway by the family business OSO Hotwater since 1932.

CLASS LEADING QUALITY

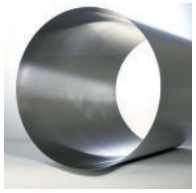
Produced in Norway since 1932 by the family business OSO Hotwater.

MORE HOT WATER

15% more hot water than others with smart solutions.

UNIQUE INSULATION

The market's best insulated water heaters save approx. 500 kWh/year.



STRONGER

OSO withstands more with EVERLAST™ steel and ULTRAWELD™ technology.

TOUGHER

Maximum durability in hard water with INCOTEC™ heating elements.

5 YEAR WARRANTY

A 5-year warrenty on the pressure tank provides peace of mind and unbeatable lifetime economy.

ENVIRONMENTALLY FRIENDLY

Large resource savings and minimal environmental impact with a 25-year lifespan.

CERTIFIED AND DEDICATED

ISO 9001 / 14001 / 45001 / 3834-2 certified for increased security.

CONTENTS

SAGA (DIRECT EL.)

8

WALLY/NANO (DIRECT EL.)

11

DELTA/SAGA (INDIRECT)

14

OPTIMA (TANK-IN-TANK)

24

ACCU (BUFFER)

28

MAXI (DIRECT EL.)

32

MAXI (INDIRECT)

35

MAXI ACCU

37

WHAT WE OFFER

QUALITY

For more than 50 years we've perfected the stainless steel water heater. The ideal combination of premium materials, automated manufacturing, and intelligent solutions makes our products last longer.

EFFICIENCY

We design for minimum heat loss and maximum energy efficiency, without compromise, making your heating system cost-efficient.

THE WATER HEATING COMPANY

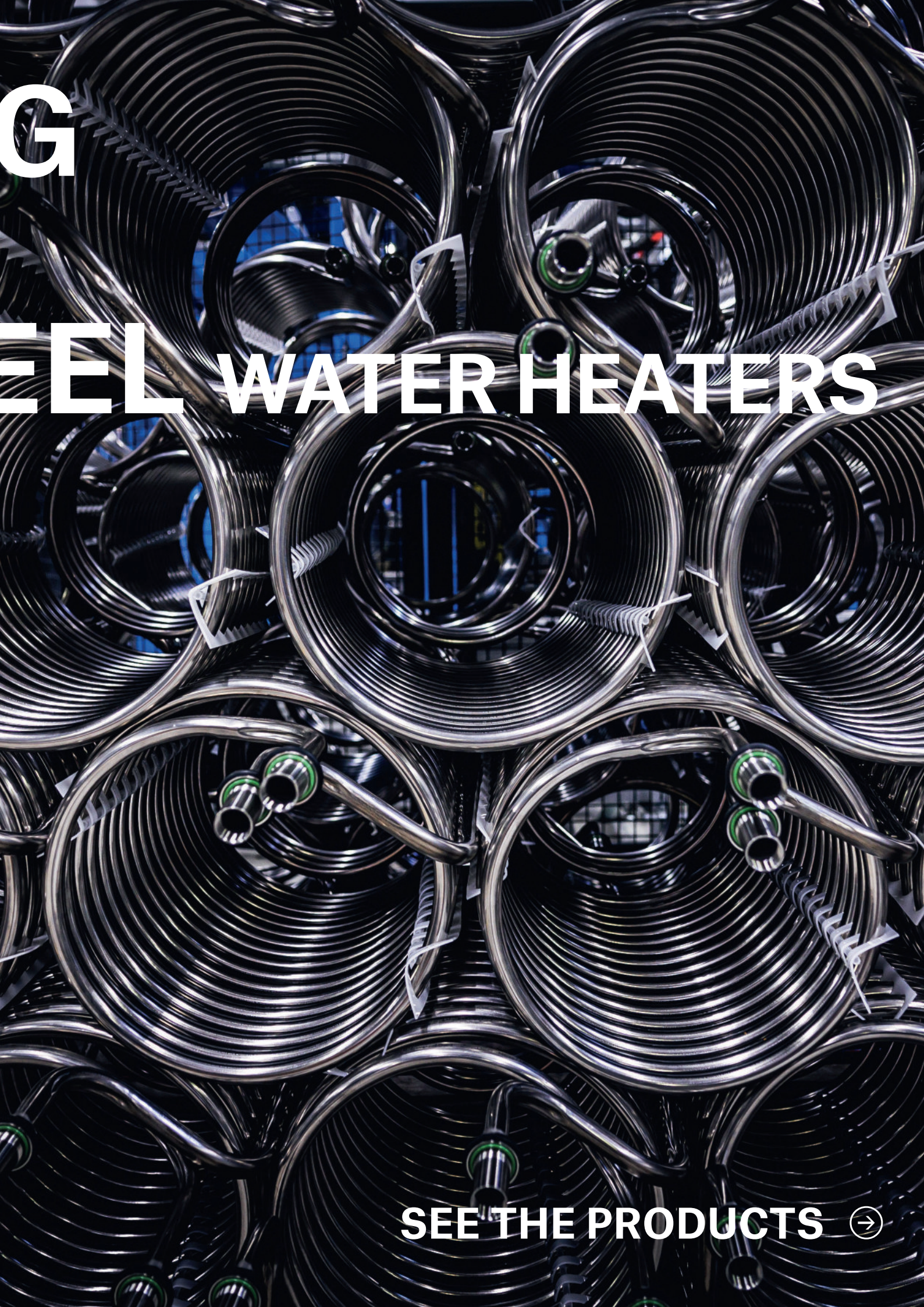
EUROPE'S LEADIN
MANUFACTURER OF
STAINLESS STE

THE FOUNDATION

Founded in 1932 by Mr. Braathen, a black-smith and air force lieutenant, OSO was the first manufacturer of water heaters in Norway. After merely 10 years in operation more than 100 people worked at OSO. His inventive-ness led to the creation of Europe's very first stainless steel water heater in 1965. Since then, more than 4 million OSO heaters has found their way to European homes.

THE FUTURE

Today, OSO Hotwater is still a family business after three generations of hard work. Dedicated to improving our products and processes, we are proud to represent the most robotized manu-facturing plant in Norway. The pioneer-ing spirit continues with product innova-tions featuring inte-grated solutions, ground-breaking material technology and added value for our customers.


G
EEL WATER HEATERS
SEE THE PRODUCTS

SAGA STANDARD - S
Unbeatable performance

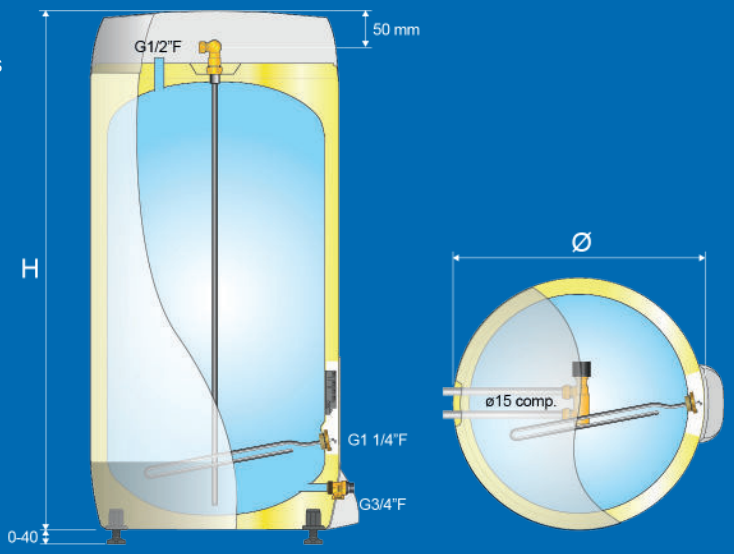
MADE IN NORWAY

SAGA STANDARD – S – is our most popular product range, suitable for most families' hot water needs. Simple, efficient direct electric heating with higher storage temperature than others and factory-fitted mixing valve. The additional G½"F connection can be used for hot water circulation or maximum temperature outlet. STANDARD is our most cost-effective series and the natural choice for a domestic electric water heater.

SAGA has been our best-selling water heater for decades. Modern and practical design hides all pipes and connections.
SAGA is easy to install with all connections on top. The mixing valve lowers the outgoing water temperature and prevents the risk of scalding.
SAGA has the market's highest storage temperature for unbeatable performance and more hot water.

WHY SAGA STANDARD?

- Save approx. 500 kWh / year vs. glass wool insulated products
- Higher storage temperature provides more hot water



KEY COMPONENTS

Thermostat:	Adjustable 60 - 90 °C
Mixing valve:	Adjustable 40 - 85 °C
Safety valve:	9 bar / G ¾"F overflow
Mains cable:	3 m. With schuko plug
Heating element:	G 1.¼"M / limescale resistant
Appliance feet:	Adjustable 0 - 40 mm.

TECHNICAL DATA

OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
1 1 009 121	S 150 - 2 kW/1x230V	Ø570x 830	3.5	31	0.39	143	255	-	53	70	-	B	-
1 1 003 543	S 200 - 3 kW/1x230V	Ø570x1260	4.0	39	0.47	194	344	-	66	70	-	C	-
1 1 003 544	S 300 - 3 kW/1x230V	Ø570x1710	5.5	51	0.64	280	490	-	86	70	-	C	-

SAGA XPRESS - SX
Hot water 3 x faster

MADE IN NORWAY

SAGA XPRESS – SX – is suitable for large hot water needs if there is limited space for installation. XPRESS delivers hot water 3 × faster than STANDARD, without using more power. Upper and lower heating elements alternate between heating the water and significantly reduces the heat-up time. The additional G½"F connection can be used for hot water circulation or maximum temperature outlet.

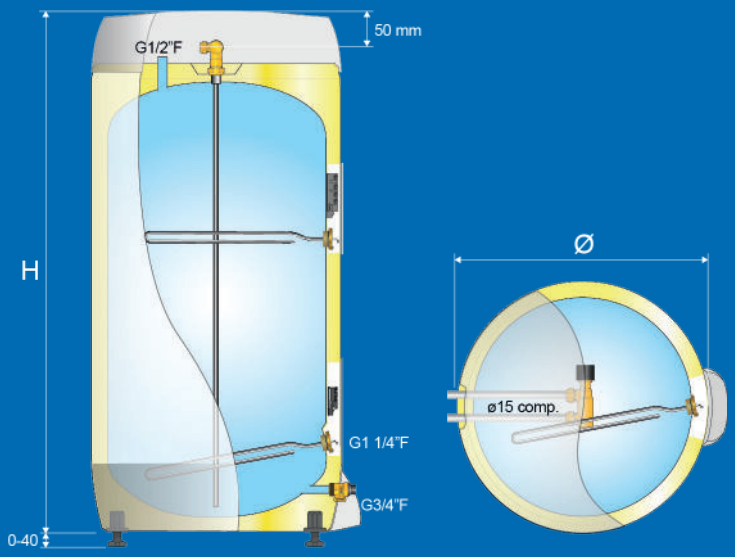
SAGA has been our best-selling water heater for decades. Modern and practical design hides all pipes and connections.
SAGA is easy to install with all connections on top. The mixing valve lowers the outgoing water temperature and prevents the risk of scalding.
SAGA has the market's highest storage temperature for unbeatable performance and more hot water.

WHY SAGA XPRESS?

- Save approx. 500 kWh / year vs. glass wool insulated products
- XPRESS delivers hot water 3 x faster than STANDARD

KEY COMPONENTS

Thermostat:	Adjustable 60 - 90 °C
Mixing valve:	Adjustable 40 - 85 °C
Safety valve:	9 bar / G ¾"F overflow
Mains cable:	3 m. with schuko plug
Heating element:	G 1.¼"M / limescale resistant
Appliance feet:	Adjustable 0 - 40 mm.



TECHNICAL DATA

	OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
	1 1 003 171	SX 150 - 2+(2) kW/1x230V	Ø570x1010	3.5	31	0.39	143	251	-	53	75	-	B	-
	1 1 003 172	SX 200 - 3+(3) kW/1x230V	Ø570x1260	4.5	39	0.47	194	355	-	65	75	-	C	-
	1 1 003 173	SX 300 - 3+(3) kW/1x230V	Ø570x1710	6.5	51	0.63	287	539	-	85	75	-	C	-

SAGA INDUSTRIAL - SI
For rough environments

MADE IN NORWAY

SAGA INDUSTRIAL - SI - withstands highly aggressive water and harsh installation environments. The metallic aluminum-gray outer jacket gives the water heater a modern look, and is classified C5 corrosion resistant according to ISO 9223. INDUSTRIAL also has anti-corrosion treatment which enables the water heater to withstand very aggressive water with up to 250 mg Cl./l. The additional G1/2"F connection can be used for hot water circulation or maximum temperature outlet.

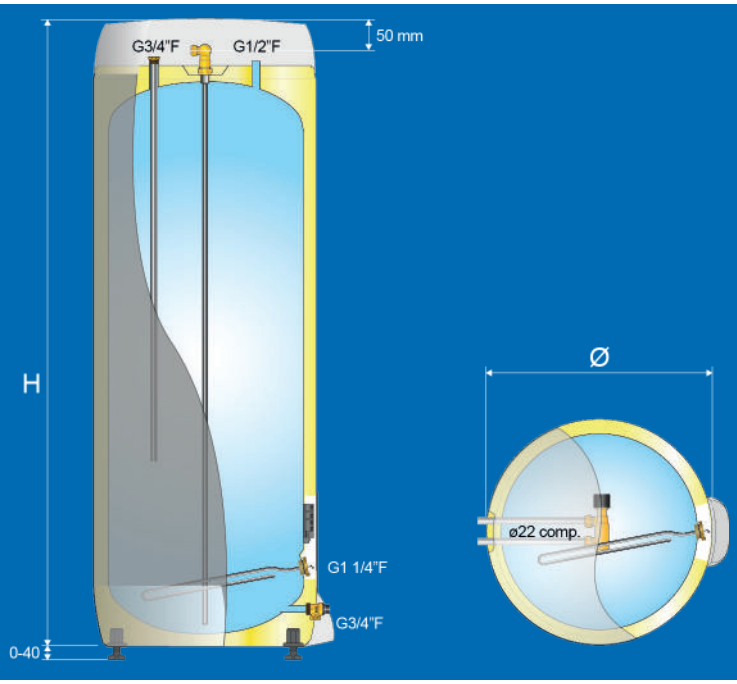
SAGA has been our best-selling water heater for decades. Modern and practical design hides all pipes and connections.
SAGA is easy to install with all connections on top. The mixing valve lowers the outgoing water temperature and prevents the risk of scalding.
SAGA has the market's highest storage temperature for unbeatable performance and more hot water.

WHY SAGA INDUSTRIAL?

- Save approx. 500 kWh / year vs. glass wool insulated products
- Withstands 3 × more aggressive environment, both inside and outside

KEY COMPONENTS

Thermostat:	Adjustable 60 - 90 °C
Mixing valve:	Adjustable 40 - 85 °C
Safety valve:	9 bar / G ¾"F overflow
Mains cable:	3 m. with schuko plug
Heating element:	G 1.¼"M / limescale resistant
Appliance feet:	Adjustable 0 - 40 mm.



TECHNICAL DATA

OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
1 1 003 181	SI 300 - 3 kW/3x400V / 1x230V	Ø570x1710	5.5	51	0.64	281	539	-	86	75	-	C	-

WALLY - W
Wall-mounted with all connections below

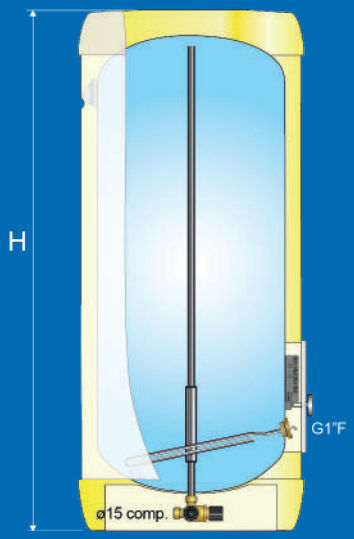
MADE IN NORWAY

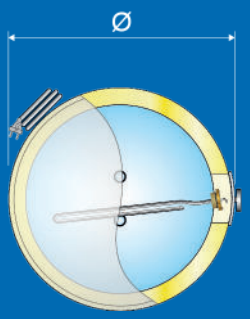
WALLY - W – has all pipe connections elegantly hidden underneath, and a slim diameter makes it especially suitable for hanging on the wall. WALLY can also be placed on the floor thanks to its unique design. WALLY can be placed close to the ceiling and save floor space with the wall bracket. Capacity can be increased by raising the temperature in the water heater to 75 °C, by using the externally adjustable thermostat. Outgoing temperature will be approx. 10 °C lower than the thermostat setting due to the patented and integrated mixing function. Practical flex hoses for easy installation included. The supplied safety valve must be mounted on the cold water inlet.

WALLY has a stylish design resembling the SAGA series, which hides all pipes and connections. The patented mixing function lowers the outgoing water temperature and reduces the risk of scalding. WALLY features low heat loss with 40 mm. PUR insulation, in combination with class-leading storage temperature for unbeatable performance and more hot water.

WHY WALLY?

- Save approx. 250 kWh / year vs. glass wool insulated products
- Save floor space with a slim diameter and all connections below
- Wall bracket included





KEY COMPONENTS

Thermostat:	Adjustable 50 - 75 °C
Mixing function:	10 °C less than thermostat
Safety valve:	9 bar / G ½"M overflow
Power cable:	2.5 m. with schuko plug
Heating element:	G 1"M / limescale resistant
Wall bracket:	Corrosion resistant

TECHNICAL DATA

OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
1 1 003 156	W 30 - 2 kW/1x230V	Ø434x542	1.0	11	0.11	30	52	539	22	70	34	C	S
1 1 003 157	W 50 - 2 kW/1x230V	Ø434x705	1.5	16	0.16	45	84	1 384	29	70	37	C	M
1 1 003 158	W 80 - 2 kW/1x230V	Ø434x1025	2.0	21	0.21	80	113	1 411	36	60	36	C	M
1 1 003 159	W 100 - 2 kW/1x230V	Ø434x1245	2.0	26	0.26	100	141	2 653	45	60	39	C	L

NANO - N
Fits everywhere

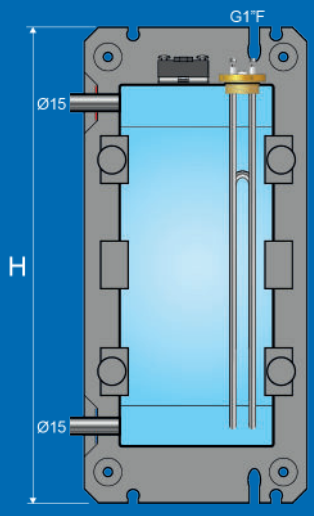
MADE IN NORWAY

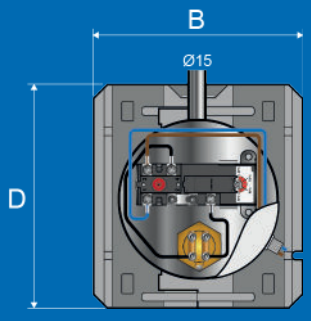
NANO – N – is perfect as a point-of-use water heater in case of extensive pipe runs, or for small hot water needs in bathrooms, cabins and dormitories. The tapping capacity is 7 liters of 40 °C hot water – more than enough for hand washing, small dishes or the like. NANO features a 3 kW heating element and is ready for use again in just 12 minutes after discharge. Capacity per hour is 75 L 40 °C hot water. NANO is only slightly larger than a A4 sheet, and is mounted upright (20 % higher capacity) or horizontally at the point-of-use.

NANO is our smallest hot water series and is suitable as a point-of-use water heater. The series is constructed of 316 stainless steel, and NANO withstands most water qualities and can be mounted anywhere. Practical and space-saving design.

WHY NANO?

- Perfect as a point-of-use water heater
- Capacity 75 L 40 °C / hour, ready for use in 12 min.
- The size of an A4 sheet and fits anywhere





KEY COMPONENTS

Thermostat:	Adjustable 40 - 70 °C
Safety valve:	9 bar / G ½"M overflow
Power cable:	2.5 m. with schuko plug
Heating element:	G 1"M / limescale resistant
Wall bracket:	Corrosion resistant

TECHNICAL DATA

OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
1 1 003 120	N 5 - 2.8 kW/1x230V	200x234x500	0.5	8	0.03	6	7	525	13	60	35	A	XXS

WATER HEATERS FOR HEAT PUMPS

All over Europe there is a change in how we heat our homes and our water. This is primarily driven by the change from fossil fuel to renewable energy sources, and high focus to reduce climate emissions. Energy crisis and increased energy costs are also a strong contributor to the fast shift across Europe. Many homes today have heat pumps already installed, or will choose this as part of their solution to heat their home in the near future. Connecting your heat pump to an indirect water heater cylinder, can be very beneficial as it can provide a more efficient and cost-effective way to heat water.

OSO Hotwater has developed a number of products that are special designed for efficient production of hot water in combination with renewable energy sources. Most of our indirect products are specialised for heat pumps and some are developed for multiple heating sources, like solar heating or bio.

Cylinders from OSO Hotwater are all insulated with world leading insulation, specifically invented for hot water cylinders. Our welding technique is unrivalled when it comes to welding stainless steel cylinders.

The focus for OSO Hotwater has always been to produce as energy efficient and environmentally friendly as possible and at the same time deliver high quality water heater with a modern and appealing design.

SAGA COIL - SC
Custom made for boilers

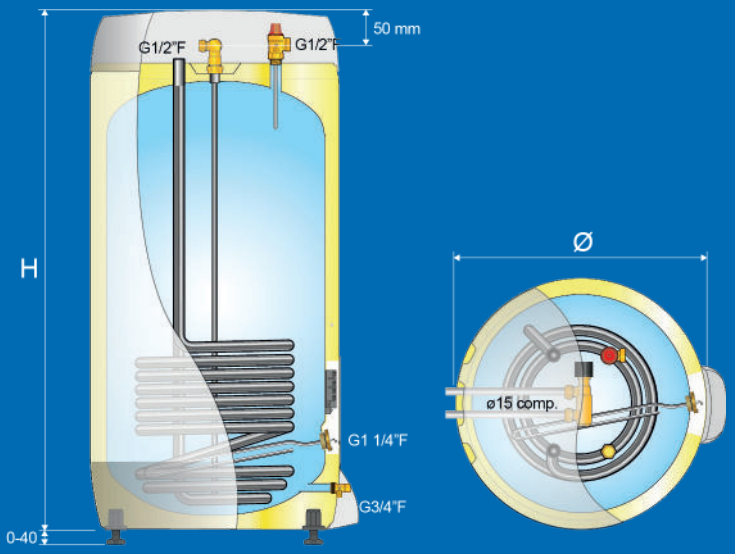
MADE IN NORWAY

SAGA COIL – SC – is designed for high temperature energy sources such as gas boilers, bio-fuel or district heating up to 25 kW due to the integrated, efficient tube heat exchanger. SAGA COIL features large capacity as the input power can be significant, and hot water will almost always be available. SAGA COIL is delivered with sensor pocket, pressure and temperature release valve and separate drain valve. The electric heating element can be as back-up for added operational safety.

SAGA has been our best-selling water heater for decades. Modern and practical design hides all pipes and connections.
SAGA is easy to install with all connections on top. The mixing valve lowers the outgoing water temperature and prevents the risk of scalding.
SAGA has the market's highest storage temperature for unbeatable performance and more hot water.

WHY SAGA COIL?

- Save approx. 500 kWh / year vs. glass wool insulated products
- Integrated heat exchanger for bio-water heater / district heating ≤ 25 kW
- Electric operation during the summer or as a back-up



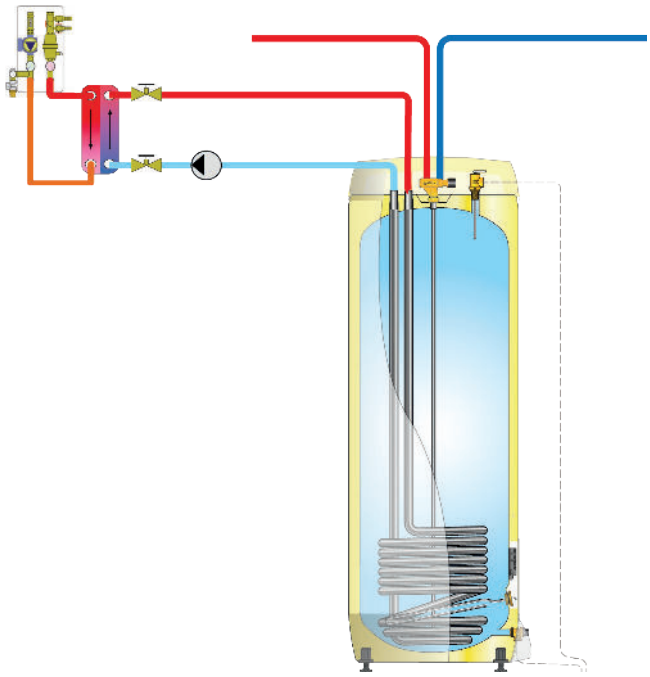
KEY COMPONENTS

Thermostat:	Adjustable 50 - 75 °C
Mixing valve:	Adjustable 40 - 70 °C
Safety valve:	9 bar / 90 °C / G ½"F overflow
Drain valve:	10 mm. hose coupling
Mains cable:	3 m. with schuko plug
Heating element:	G 1.¼ "M / limescale resistant
Appliance feet:	Adjustable 0 - 40 mm.

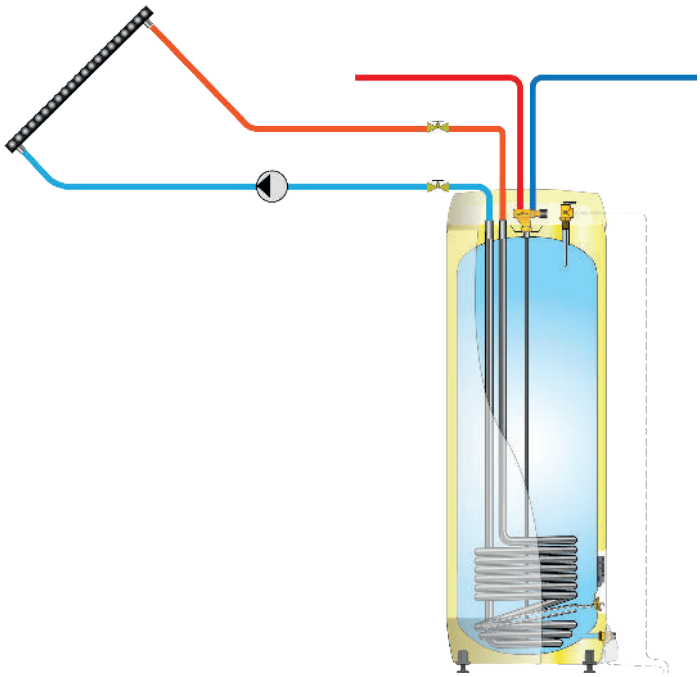
TECHNICAL DATA

OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
1 1 009 722	SC 150 - 3 kW/1x230V+HX 0.8m²	Ø570x1010	-	31	0.37	140	251	-	52	75	-	B	-
1 1 009 723	SC 200 - 3 kW/1x230V+HX 1.0m²	Ø570x1260	-	39	0.46	190	355	-	64	75	-	C	-
1 1 009 724	SC 300 - 3 kW/1x230V+HX 1.1m²	Ø570x1710	-	51	0.62	277	539	-	84	75	-	C	-

SAGA COIL - SYSTEM SCHEMATIC



Saga Coil SC 300 with district heating



Saga Coil SC 300 with solar collector

PRESSURE DROP TABLE (mbar)

OSO No.	Product name	540 L/h 0.15L/s	900 L/h 0.25 L/s	1 800 L/h 0.50 L/s	2 700 L/h 0.75 L/s	3 600 L/h 1.00L/s	4 500 L/h 1.25 L/s	5 400 L/h 1.50 L/s	kv-value m³/hour
11 009 722	SC 150 - 3 kW/1x230V+HX 0.8m²	26	65	220	457	775	1 160	1 620	4.15
11 009 723	SC 200 - 3 kW/1x230V+HX 1.0m²	35	82	283	586	1 000	1 520	2 130	3.60
11 009 724	SC 300 - 3 kW/1x230V+HX 1.1m²	37	91	284	590	1 015	1 530	2 140	3.60

DELTA GEOCOIL - DGC

Custom designed for heat pumps up to 18 kW

MADE IN NORWAY

DELTA GEOCOIL – DGC – is specifically designed for highly efficient hot water production for all types of heat pumps up to 18 kW (200 L = 15 kW / 300 L = 18 kW), thanks to the large heating surface (2.6 – 3.1m2) of the tube heat exchanger. DELTA GEOCOIL features an electric heating element at the bottom of the tank for maximum protection against legionella (must be controlled externally). The heater can also be used as a back-up for the heat pump when needed, which provides maximum operational reliability.

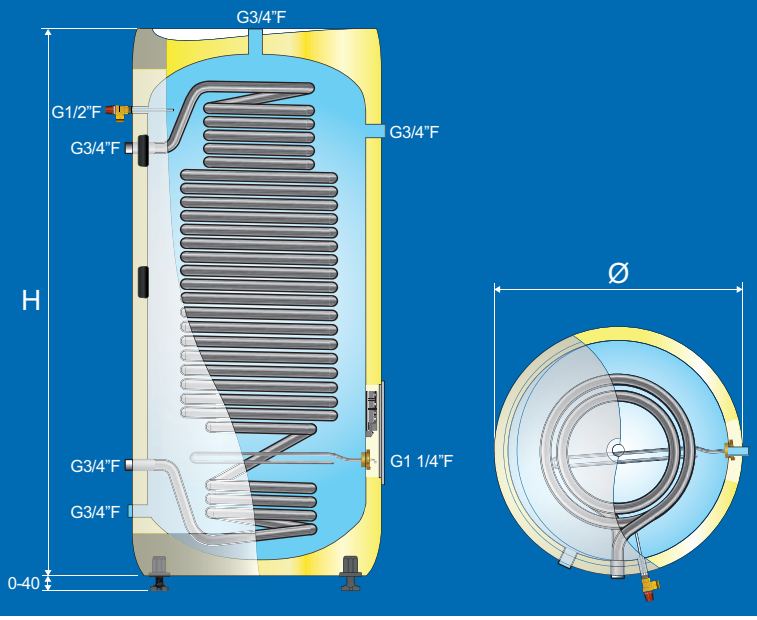
DELTA is our most energy-efficient water heater series, and minimizes heat loss with best-in-class PUR insulation, vacuum panels and functional design. DELTA has been developed with a number of smart technical solutions especially suitable for alternative energy sources such as heat pumps or solar collectors.
DELTA also features unique corrosion protection technology.

WHY DELTA GEOCOIL?

- Save approx. 650 kWh / year vs. glass wool insulated products
- Integrated heat exchanger for heat pump ≤ 18 kW
- Unique corrossion resistance features

KEY COMPONENTS

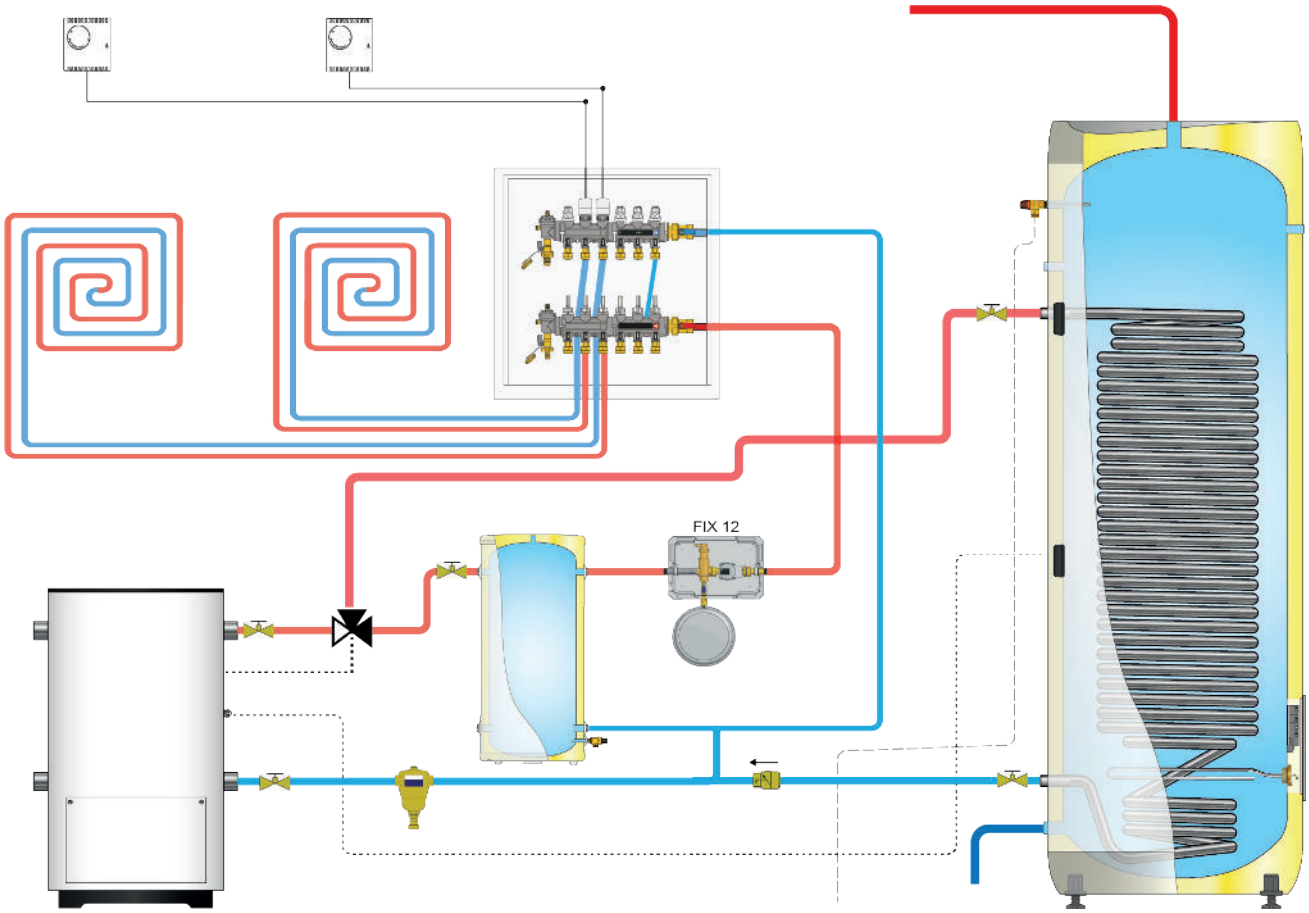
Thermostat:	Adjustable 50 - 75 °C
Safety valve:	9 bar / 90 °C / G ½"M overflow
Heating element:	G 1.¼"M / limescale resistant
Sensor pockets:	2 pcs. for 6/8 mm. sensor
Appliance feet:	Adjustable 0 - 40 mm.



TECHNICAL DATA

OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
11 003 138	DGC 200 - 2.8 kW/1x230V + HX 2.6m²	Ø595x1270	-	53	0.48	191	-	-	58.0	70	-	B	-
11 003 139	DGC 250 - 2.8 kW/1x230V + HX 2.6m²	Ø595x1540	-	73	0.57	245	-	-	62.0	70	-	B	-
11 003 141	DGC 300 - 2.8 kW/1x230V + HX 3.1m²	Ø595x1750	-	85	0.64	282	-	-	68.5	70	-	B	-

DELTA GEOCOIL - SYSTEM SCHEMATIC



Delta Geocoil DGC 300 with heat pump, FIX 12 and underfloor heating

PRESSURE DROP TABLE (mbar)

	OSO No.	Product name	540 L/h 0.15L/s	900 L/h 0.25 L/s	1 800 L/h 0.50 L/s	2 700 L/h 0.75 L/s	3 600 L/h 1.00L/s	4 500 L/h 1.25 L/s	5 400 L/h 1.50 L/s	kv-verdi m^3/time	
	1 1 003 138	DGC 200 - 2.8 kW/1x230V + HX 2.6m^2	40	109	415	824	1 440	2 150	3 050	3.0	
	1 1 003 139	DGC 250 - 2.8 kW/1x230V + HX 2.6m^2	40	109	415	824	1 440	2 150	3 050	3.0	
	1 1 003 141	DGC 300 - 2.8 kW/1x230V + HX 3.1m^2	51	117	440	890	1 550	2 330	3 340	2.9	

DELTA TWINCOIL - DTC
Ultimate energy flexibiliy

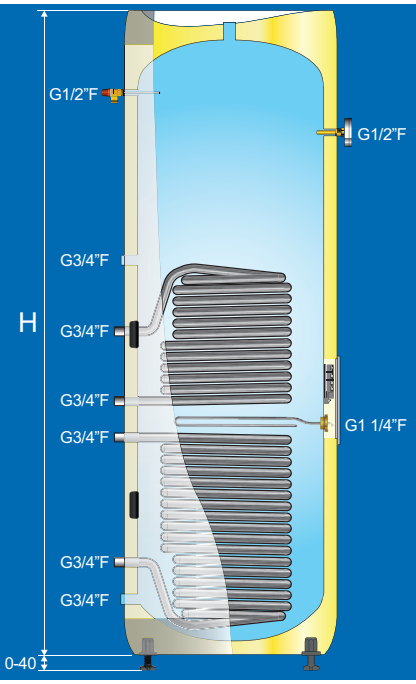
MADE IN NORWAY

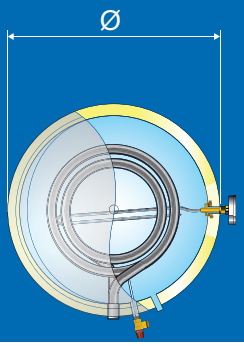
DELTA TWINCOIL – DTC – is extremely flexible and can utilize several energy sources for maximum efficient hot water production. DELTA TWINCOIL fits most combinations of renewable energy sources (solar ≤ 12m2 / heat pump ≤ 5 kW) in combination with high temperature heat source (gas or bio-fuel boiler up to 25 kW.) The electric heating element can be used as backup heater, additional heating for added capacity, or legionella protection (controlled externally).

DELTA is our most energy-efficient water heater series, and minimizes heat loss with best-in-class PUR insulation, vacuum panels and functional design. DELTA has been developed with a number of smart technical solutions especially suitable for alternative energy sources such as heat pumps or solar collectors. DELTA also features unique corrosion protection technology.

WHY DELTA TWINCOIL?

- Save approx. 650 kWh / year vs. glass wool insulated products
- Two integrated heat exchangers for maximum flexibility
- Unique corrossion resistance features





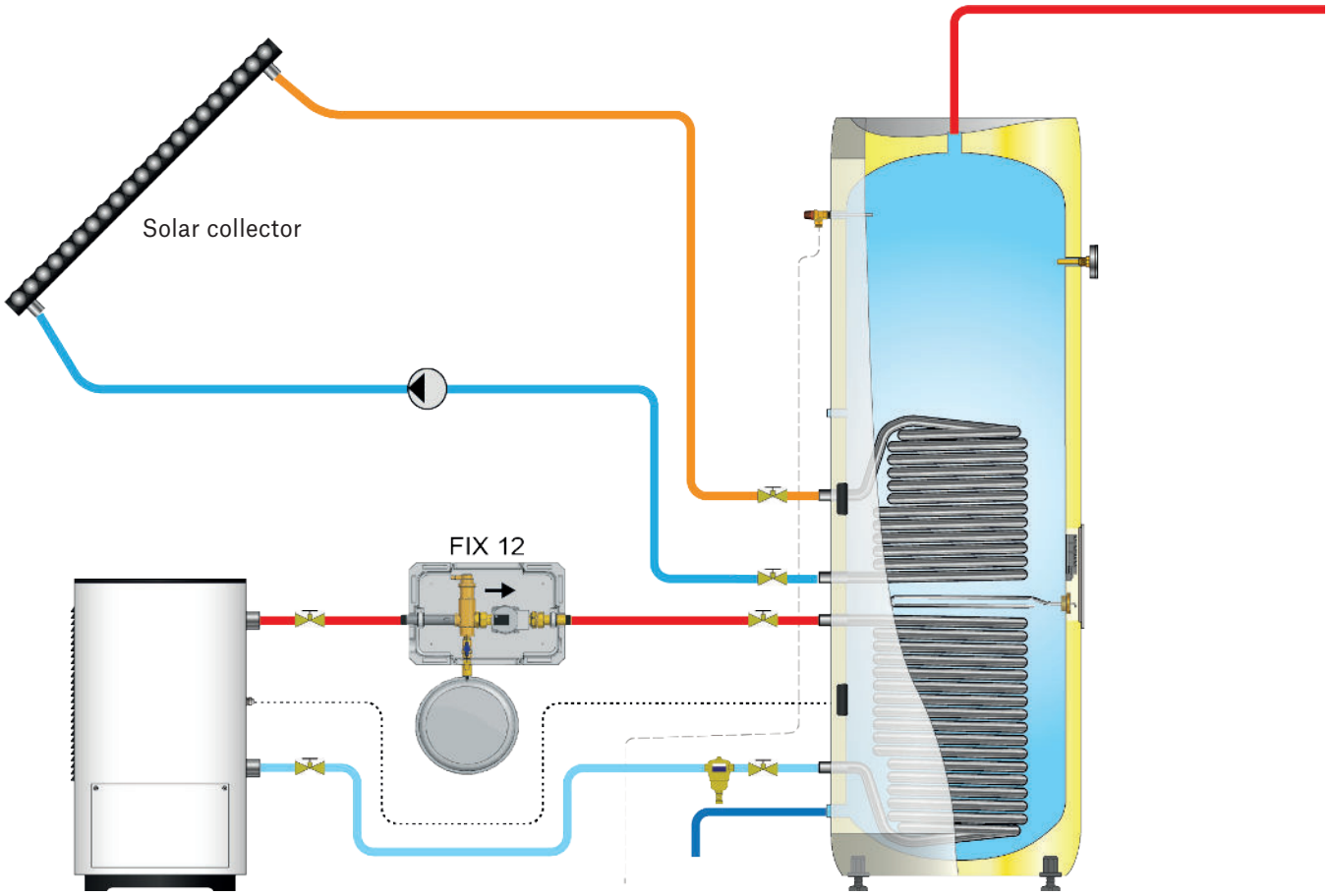
KEY COMPONENTS

Thermostat:	Adjustable 50 - 75 °C
Safety valve:	9 bar / 90 °C / G ½"M overflow
Heating element:	G 1.¼ "M / limescale resistant
Thermometer:	Disc thermometer, 0 - 100 °C
Sensor pockets:	2 pcs. for 6/8 mm. feel
Appliance feet:	Adjustable 0 - 40 mm.

TECHNICAL DATA

OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
1 1 003 143	DTC 300 - 2.8kW/1x230V + HX 1.4m² + 0.8m²	Ø595x1750	-	64	0.64	280	-	-	68	70	-	B	-

DELTA TWINCOIL - SYSTEM SCHEMATIC



Delta Twincoil DTC with with external heat source, FIX 12 and solar collector

PRESSURE DROP TABLE (mbar)

	OSO No.	Product name	540 L/h 0.15L/s	900 L/h 0.25 L/s	1 800 L/h 0.50 L/s	2 700 L/h 0.75 L/s	3 600 L/h 1.00L/s	4 500 L/h 1.25 L/s	5 400 L/h 1.50 L/s	kv-verdi m^3/time	
	1 1 003 143	DTC 300 - 2.8 kW/1x230V + HX 1.4m^2 + 0.8m^2	43	104	370	724	1 265	1 880	2 630	3.2	

50 YEARS OF
ENVIROMENTAL
AWARENESS

2nd gen. Braathen was an environmentalist at heart and created what was to become «Scandinavias most environmentally friendly company» (SCANVAC award). After 50 years of continuous efforts for the environment, the Norwegian Government (GRIP) awarded OSO the «Glassbear» for its work. Our target remains the same – to have as little impact as possible on Mother Nature.

WORKING TIRELESSLY FOR
SUSTAINABILITY
IN EVERYTHING WE DO

Sustainability has been an essential concept in everything OSO Hotwater has done over the past 5 decades. We are at the fore-front of the industry when it comes to reducing our footprint. We will continue to strive to be at the forefront by developing new products that meet today's needs without destroying the opportunities of future generations.

REDUCING THE USE OF
ENERGY
FOR EVERYONE

The need for energy for an ever-growing population is one of the biggest challenges facing the world today. We, as a manufacturer of high-quality water heaters, work on several fronts to reduce energy consumption in both companies and individuals. All our products are developed with as low energy consumption as possible in mind.

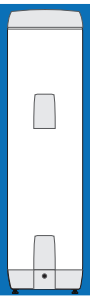
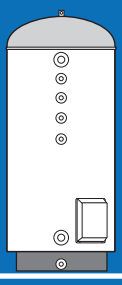
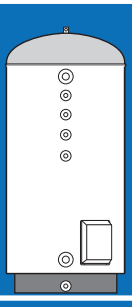
OSO HOTWATER PRODUCT SELECTOR

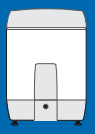
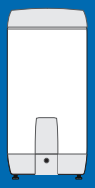
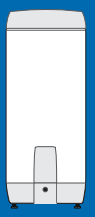
OSO Hotwater carries a wide product range with many different types of water heaters. We have put together an overview that shows our recommendation according to your needs.

PRODUCT SELECTOR

OSO HOTWATER PRODUCT RANGE 2023

SUITABLE FOR NO. OF PEOPLE:			0 - 1	1	1 - 2	1 - 2	2	2
		DIAMETER:	230 x 200	Ø435	Ø435	Ø435	Ø435	Ø
CAP. IS CALCULATED FOR HOUSING WITH SHOWER IN THE CASE OF BATHTUBS, THE NO. OF PERS. MUST BE REDUCED BY 1	DESIGNATION NEW	DESIGNATION OLD	 5	 30	 50	 80	 100	 12 15
PRODUCTS								
SAGA	S	-						
SAGA XPRESS	SX	-						
SAGA COIL	SC	-						
SAGA INDUSTRIAL	SI	DI						
NANO	N	RM	11 003 120					
WALLY	W	S		11 003 314	11 003 315	11 003 316	11 003 317	
DELTA GEOCOIL	DGC	-						
DELTA TWINCOIL	DTC	-						
OPTIMA GEOCOIL	OGC	EPC						
OPTIMA TWINCOIL	OTC	EPC						
ACCU	A	50R			11 009 165*		11 003 162	
ACCU STANDARD	AS	50RE					11 003 163	
ACCU GEOCOIL	AGC	50RC(E)						

SUITABLE FOR NUMBER OF PEOPLE:			5 - 6	7 - 8	Calculated	Calculated	Calculated
DIAMETER:			Ø595	Ø595	Ø800	Ø1 000	Ø1 290
CAPACITY IS CALCULATED FOR HOMES WITH SHOWERS. IN THE CASE OF A BATH-TUB, THE NO. OF PERS. MUST BE REDUCED BY 1.	DESIGNATION NEW	DESIGNATION OLD					
PRODUCTS			300	400	600	1 000	2 000
MAXI	M	17R		11 009 866	11 003 358	11 003 353	11 003 354
MAXI STANDARD	MS	17RE	11 009 861	11 008 985	11 009 827	11 009 897	11 003 362
MAXI COIL	MC	17RVE					
MAXI GEOCOIL	MGC	17RTVE		11 008 988	11 009 918	11 009 922	
MAXI ACCU GEOCOIL	MAGC	17RB			11 003 229	11 003 237	
MAXI ACCU HEAT	MA	51R		11 009 866	11 003 351	11 003 345	11 003 347
MAXI ACCU COOL	MA	51R		11 009 866	11 003 344	11 003 338	11 003 340

- 3	1 - 2	2	2 - 3	2 - 3	3	3 - 4	4 - 5	5 - 6
435	Ø560	Ø560	Ø560	Ø580	Ø580	Ø580	Ø580	Ø580
								
20/ 50	80	100	120	120	150	200	250	300
					1 1 003 542	1 1 003 543		1 1 003 544
					1 1 003 171	1 1 003 172		1 1 003 173
					1 1 009 722	1 1 009 723		1 1 009 724
								1 1 003 181
						1 1 003 138	1 1 003 139	1 1 003 141
								1 1 003 143
								1 1 009 417
								1 1 009 418
						1 1 009 745		
								1 1 009 867

*The product is an A 60 - 60 litres

SYMBOL		AREA OF USE			HEATING METHOD				FUNCTIONS				
X RECOMMENDED/ INCLUDED O POSSIBLE - NOT POSSIBLE/ NOT INCLUDED	DESIGNATION NEW	TAP WATER	ROOM HEATING	ACCUMULATION	SOLAR READY/EL./HOT W.	EL. DIRECT	HEAT PUMP/LOW TEMP.	BOILER/HIGH TEMP.	EL. BACKUP	PREHAET (EL./COIL)	REHAET (TAIL LOAD)	HOT WATER CIRCULATION	
MAXI	M	X	-	O	X	-	O	X	-	-	-	X	
MAXI STANDARD	MS	X	-	O	X	X	O	-	X	O	X	X	
MAXI COIL	MC	X	-	O	X	O	O	X	X	-	-	X	
MAXI GEOCOIL	MGC	X	-	O	X	O	X	O	X	X	X	X	
MAXI ACCU GEOCOIL	MAGC	O	O	X	X	-	X	O	-	X	-	O	
MAXI ACCU HEAT	MA	-	O	X	O	-	X	X	-	-	-	-	
MAXI ACCU COOL	MA	-	-	X	-	-	-	-	-	-	-	-	

OPTIMA GEOCOIL - OGC

Tank-in-tank unit with domestic hot water and buffer tank integrated

MADE IN NORWAY

OPTIMA GEOCOIL – OGC – features high efficiency and fast recovery times, and covers the hot water demand for at least 5 people as well as heating demand in homes up to 400m2 in a single unit. OPTIMA COIL is suitable for heat pumps up to 12 kW, by way of the stainless steel tube heat exchanger with a large surface area of 1.8m2 in the DHW tank. OPTIMA GEOCOIL also features an electric heating element at the bottom of the DHW tank for maximum protection against legionella (must be controlled externally). The heater can also be used as a backup for the heat pump. The buffer tank in stainless steel is 62 L, perfect for heat pumps of this size.

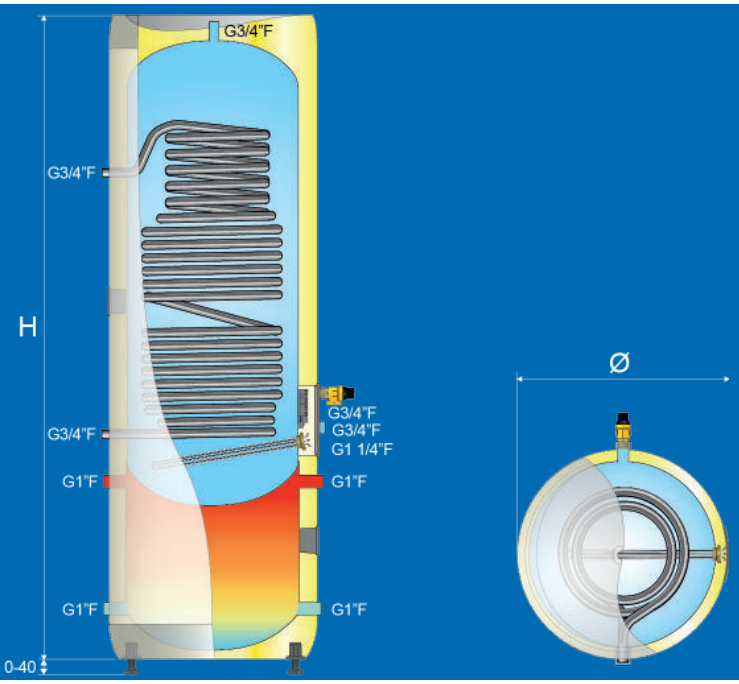
OPTIMA is the market's most advanced and energy efficient tank-in-tank products, with class-leading PUR insulation and patented solutions to increase hot water production from heat pumps. The OPTIMA series integrates both a stainless steel buffer tank and heat exchangers in one unit, and takes up minimal space.

WHY OPTIMA GEOCOIL?

- Save approx. 650 kWh / year vs. glass wool insulated products
- Integrated heat exchanger for heat pump ≤ 12 kW
- Integrated stainless buffer tank saves floor space

KEY COMPONENTS

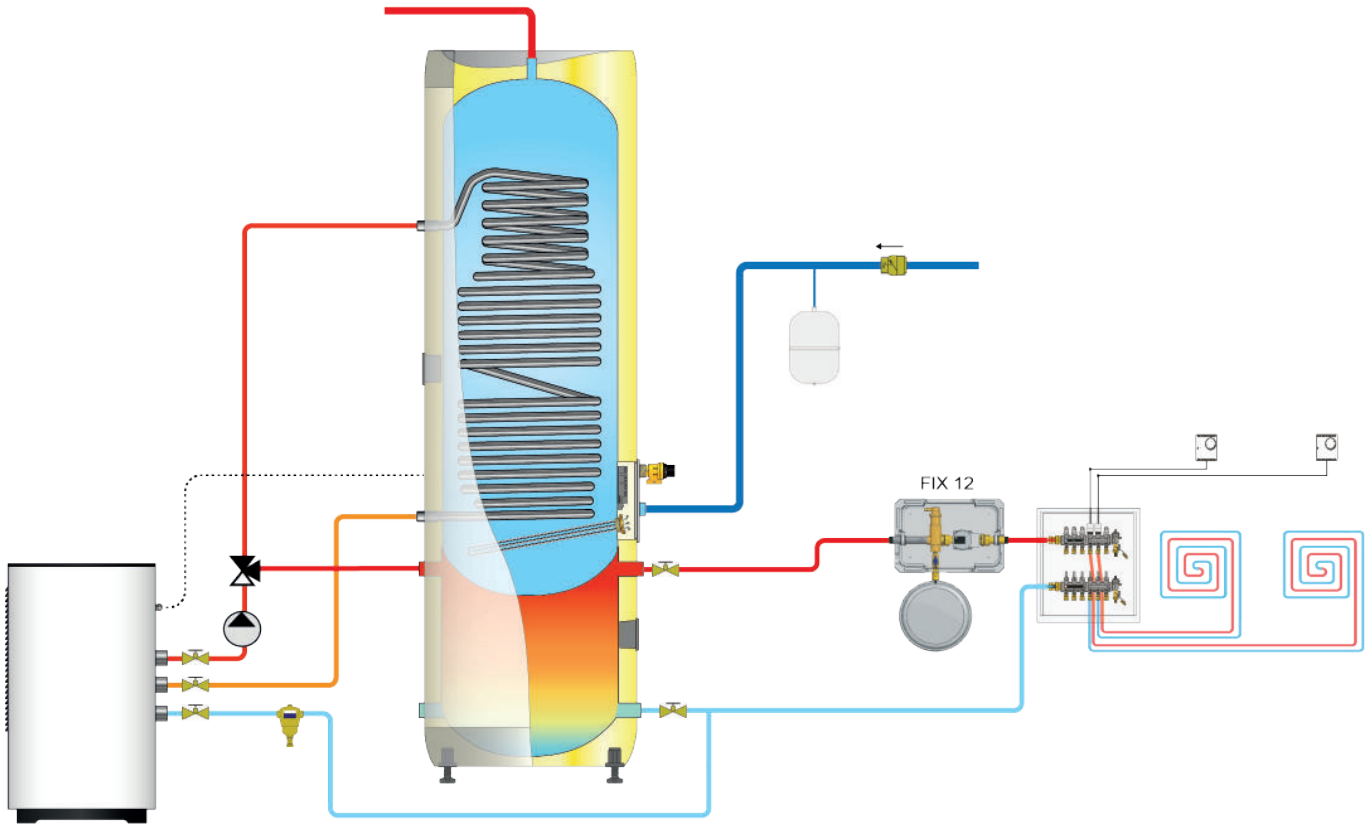
Thermostat DHW:	Adjustable 50-80 °C
Safety valve VV:	9 bar, G ¾"F overflow
Heating element:	G 1.¼"M / limescale resistant
Sensor pockets:	2 pcs. for 6 - 8 mm. sensor
Appliance feet:	Adjustable 0 – 40 mm.



TECHNICAL DATA

OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
11 009 417	OGC 300 - 3 kW/1x230V+HX1.8m²	Ø595x1760	-	68	0.64	233/62	375	-	54	75	-	B	-

OPTMA GEOCOIL - SYSTEM SCHEMATIC



Optima Geocoil with underfloor heating, heat pump and FIX 12

PRESSURE DROP TABLE (mbar)

	OSO No.	Product name	540 L/h 0.15L/s	900 L/h 0.25 L/s	1 800 L/h 0.50 L/s	2 700 L/h 0.75 L/s	3 600 L/h 1.00L/s	4 500 L/h 1.25 L/s	5 400 L/h 1.50 L/s	kv-verdi m^3/time	
	1 1 009 417	OGC 300 - 3 kW/1x230V+HX1.8m²	50	135	455	930	1 580	2 350	3 350	2.8	

OPTIMA TWINCOIL - OTC

Tank-in-tank unit with DHW and buffer tank integrated for multiple energy sources

MADE IN NORWAY

OPTIMA TWINCOIL – OTC – features high efficiency and fast recovery times, and covers the hot water demand for at least 6 people as well as heating requirements in homes up to 400m2 in a single unit. OPTIMA TWINCOIL is suitable for heat pumps up to 15 kW, by way of the stainless steel tube heat exchanger with a large surface area of 2.6m2 in the DHW tank. The stainless buffer tank of 85 L can be connected to ≤ 12m2 solar collectors using a second tube heat exchanger (0.7m2). The 9 kW electric heater in the buffer tank provides full energy flexibility as well as back-up. OPTIMA TWINCOIL also features an electric heating element in the DHW tank for legionella protection (controlled externally). The heater can also be used as DHW backup for the heat pump.

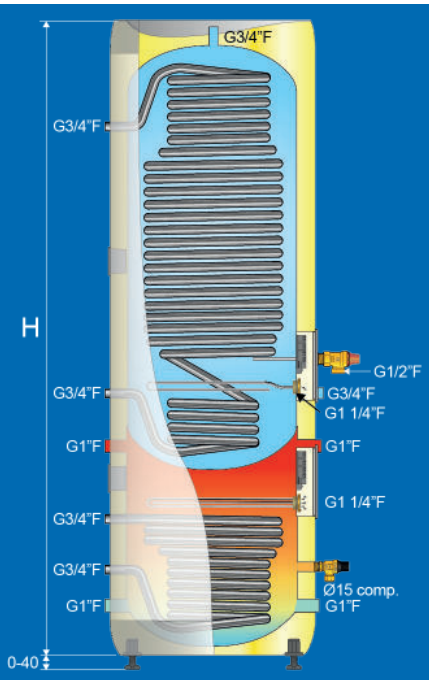
OPTIMA is the market's most advanced and energy efficient tank-in-tank products, with class-leading PUR insulation and patented solutions to increase hot water production from heat pumps. The OPTIMA series integrates both a stainless steel buffer tank and heat exchangers in one unit, and takes up minimal space.

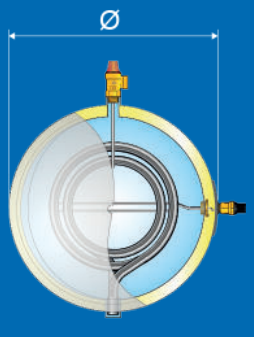
WHY OPTIMA TWINCOIL?

- Save approx. 650 kWh / year vs. glass wool insulated products
- Integrated heat exchangers for HP ≤ 15 kW / solar ≤ 12m²
- Integrated stainless buffer tank of 85 L

KEY COMPONENTS

Thermostat DHW/Buffer:	Adjustable 50-75°C + 30-60°C
Security VV/Buffer:	9 bar/90°C, G ½"M + 3 bar, G ½"M
Heating elements:	G 1.¼"M / limescale resistant
Sensor pockets:	2 pcs. for 6 - 8 mm. sensor
Appliance feet:	Adjustable 0 – 40 mm.

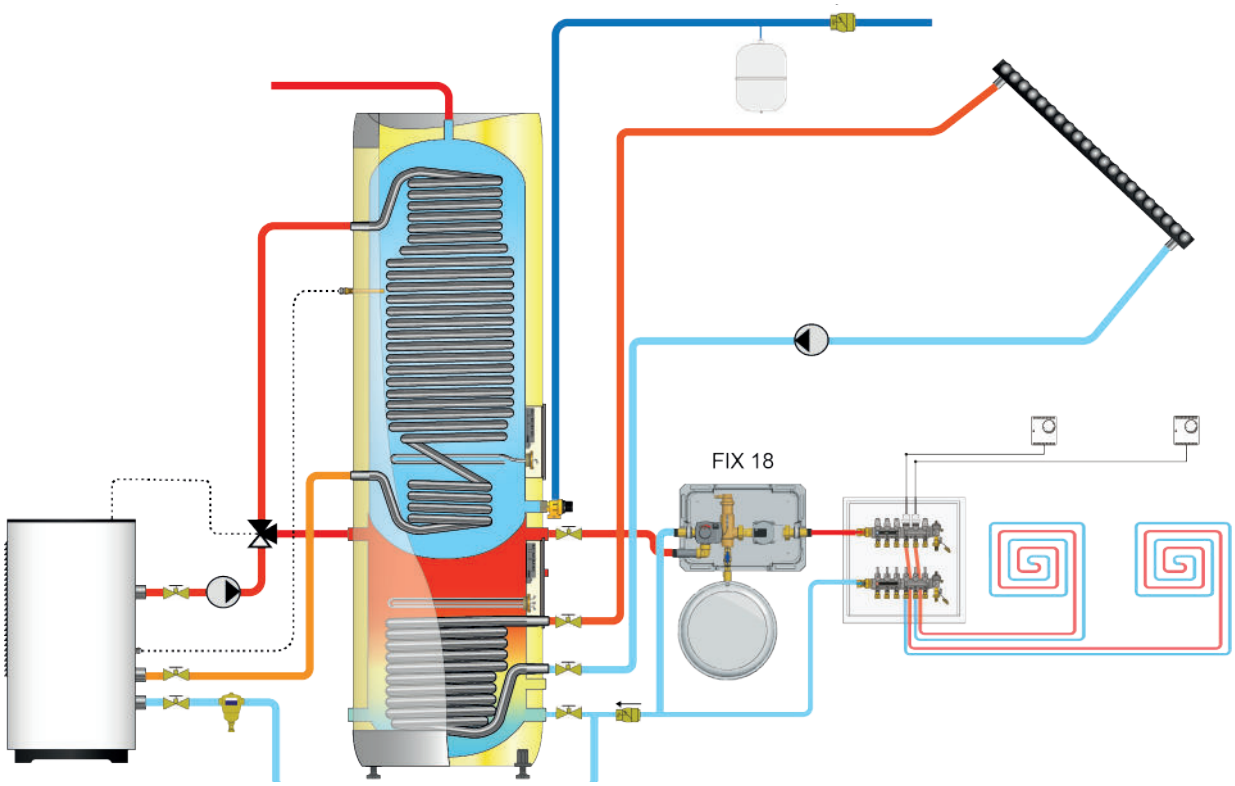




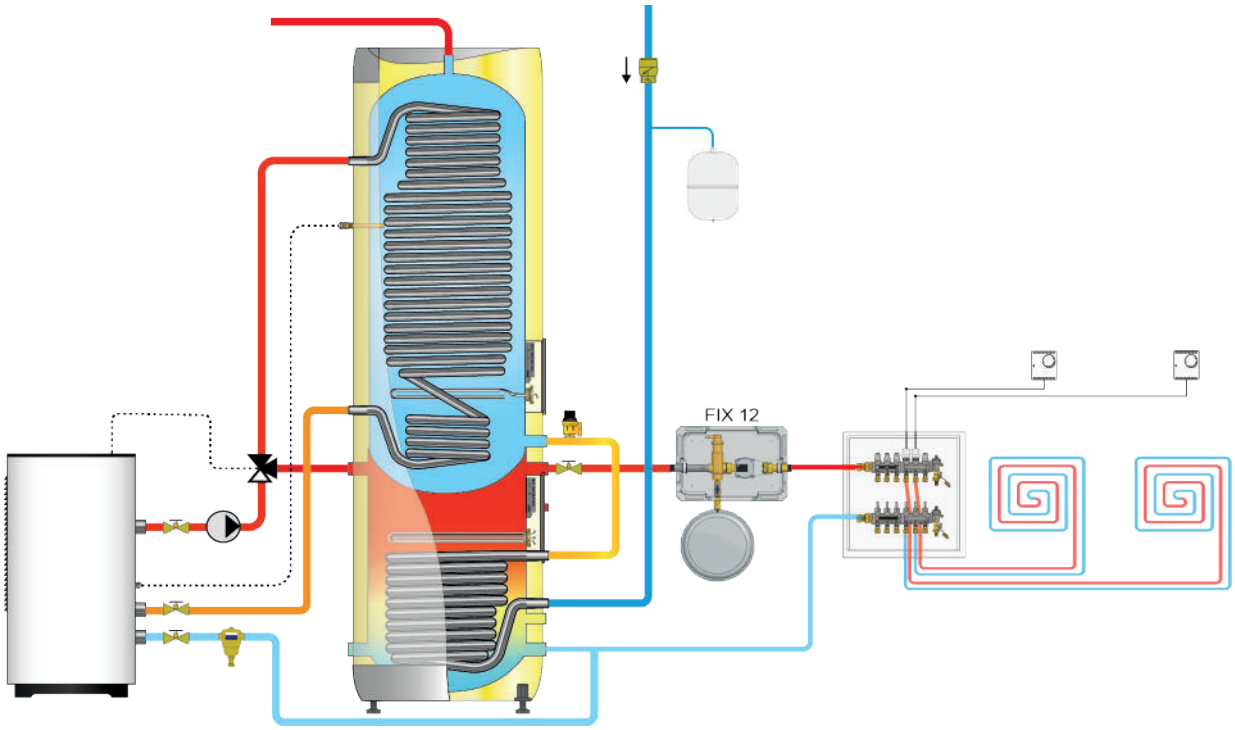
TECHNICAL DATA

OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
11 009 418	OTC 300 - 3+9kW/1/3x230V+HX 2.6+0.7m²	Ø595x1760	-	71	0.64	200/85	335	-	49	75	-	B	-

OPTIMA TWINCOIL - SYSTEM SCHEMATIC



OTC 300 with HP, DHP prioritization, underfloor heating, solar collector (solar heating)



OTC 300 with HP, DHW prioritization, underfloor heating and tap water preheating in the coil in the lower magazine

PRESSURE DROP TABLE (mbar)

OSO No.	Product name	540 L/h 0.15L/s	900 L/h 0.25 L/s	1 800 L/h 0.50 L/s	2 700 L/h 0.75 L/s	3 600 L/h 1.00L/s	4 500 L/h 1.25 L/s	5 400 L/h 1.50 L/s	kv-verdi m³/time
1 1 009 418	OTC 300 - 3+9 kW/1/3x230V+HX 2.6+0.7m²	24	53	188	375	650	975	1 370	4.6

ACCU - A
Buffer tank for heat pumps

MADE IN NORWAY

ACCU – A – is designed as a buffer tank for heat pumps or solar collectors. ACCU features dual sets of flow/return connections, which provide flexible connection and installation options, in addition to a separate G½"F connection for air vents and a drain connection. ACCU ensures that the energy source has optimal operating conditions and provides a stable temperature for the system.

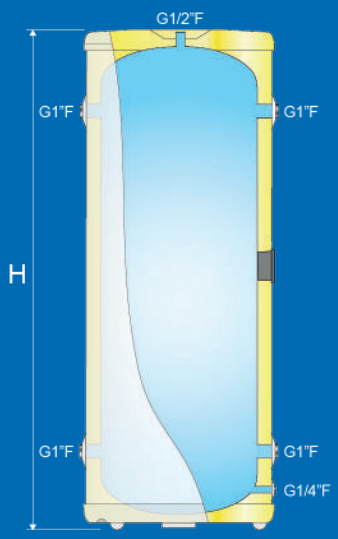
ACCU is a series of highly energy-efficient, PUR insulated buffer tanks for heating systems. ACCU is in stainless steel design which ensures a trouble-free system vs. buffer tanks in mild steel. ACCU features a modern design and fits perfectly in any heating system.

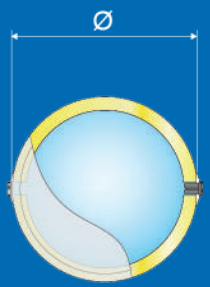
WHY ACCU?

- Stainless steel buffer tank for heating system
- Provides optimal operating conditions for heat pumps

KEY COMPONENTS

Sensor pockets: 1 pc. for 6-8 mm. sensor
Wall bracket: Corrosion resistant





TECHNICAL DATA

OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
1 1 009 165	A 60	Ø434x741	-	18	0.18	57	-	-	44	-	-	C	-
1 1 003 162	A 100	Ø434x1168	-	28	0.27	100	-	-	55	-	-	B	-
1 1 009 745	A 200	Ø595x1265	-	39	0.48	199	-	-	46	-	-	B	-

ACCU STANDARD - AS
Buffer tank with electric heaters

MADE IN NORWAY

ACCU STANDARD – AS – is designed as a buffer tank for heat pumps or solar collectors. ACCU STANDARD features dual sets of flow/return connections, which provide flexible connection and installation options, in addition to a separate G1/2"F connection for air vents and a drain connection. ACCU STANDARD has electrical heating elements factory fitted, which provides the option for additional heating and operational security in the event of any operational issues with the energy source. ACCU ensures that the energy source has optimal operating conditions and provides a stable temperature for the system.

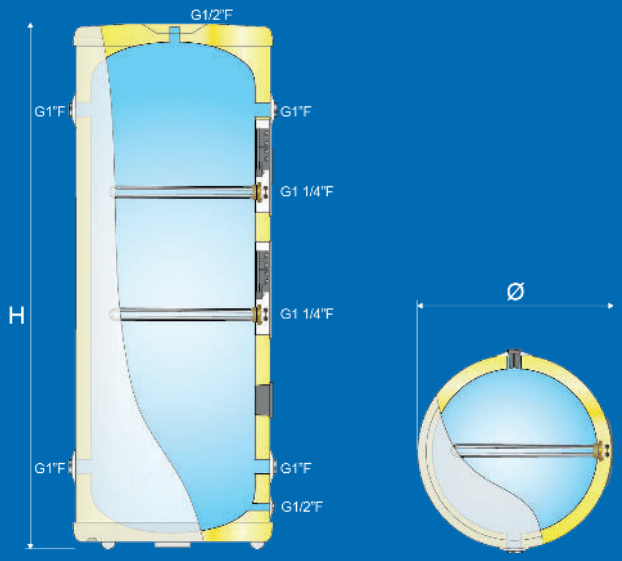
ACCU is a series of highly energy-efficient, PUR insulated buffer tanks for heating systems. ACCU is in stainless steel design which ensures a trouble-free system vs. buffer tanks in mild steel. ACCU features a modern design and fits perfectly in any heating system.

WHY ACCU STANDARD?

- Stainless steel buffer tank for heating system
- Provides optimal operating conditions for heat pumps
- Electric supplementary heating and / or backup for heating system

KEY COMPONENTS

Thermostat:	Adjustable 30 - 60 °C
Safety valve:	3 bar / G ½"M overflow
Heating element:	G 1.¼"M / limescale resistant
Sensor pockets:	2 pcs. for 6-8 mm. feel
Wall bracket:	Corrosion resistant



TECHNICAL DATA

	OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
	1 1 003 163	AS 100 - 5.6 kW (2.8 + 2.8)/1x230V	Ø434x1168	-	30	0.26	100	-	-	57	-	-	C	-

ACCU GEOCOIL - AGC

Buffer tank with preheating and electrical elements

MADE IN NORWAY

ACCU GEOCOIL – AS – is designed as a buffer tank for heat pump systems. ACCU GEOCOIL features an integarted tube heat exchanger with a large surface area of 3.1m2 for pre-heating domestic hot water. AGC also comes standard with dual sets of flow/ return connections, which provide flexible connection and installation options, in addition to a separate G1/2"F connection for air vents and a drain connection. ACCU GEOCOIL also has electrical heating elements factory fitted, which provides the option for additional heating and operational security in the event of any operational issues with the energy source. ACCU ensures that the energy source has optimal operating conditions and provides a stable temperature for the system.

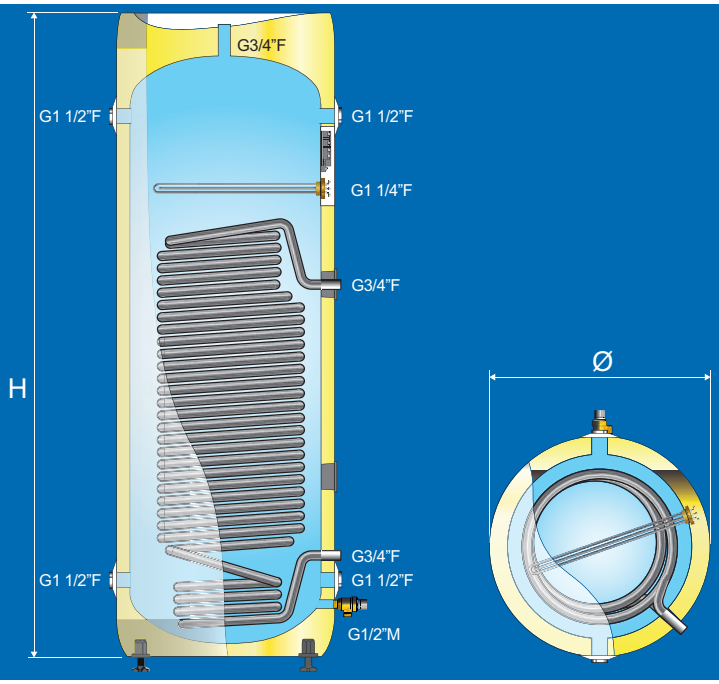
ACCU is a series of highly energy-efficient, PUR insulated buffer tanks for heating systems. ACCU is in stainless steel design which ensures a trouble-free system vs. buffer tanks in mild steel. ACCU features a modern design and fits perfectly in any heating system.

WHY ACCU GEOCOIL?

- Provides optimal operating conditions for heat pumps
- Large preheating capacity of hot water increases COP
- Electric supplementary heating and / or backup for heating system

KEY COMPONENTS

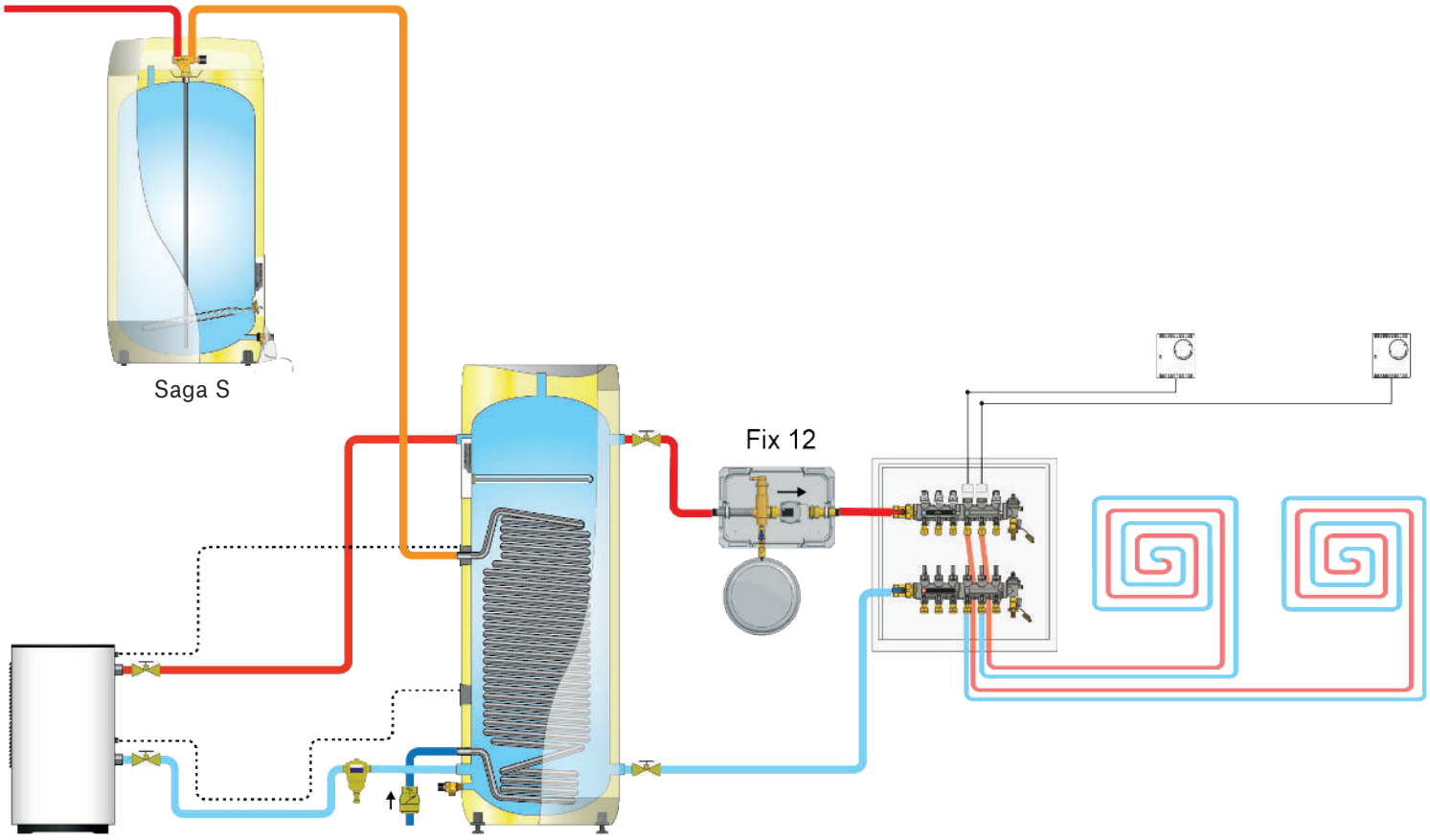
Thermostat:	Adjustable 30 - 60 °C
Safety valve:	3 bar / G ½"M overflow
Heating element:	G 1.¼"M / limescale resistant
Sensor pockets:	2 pcs. for 6-8 mm. sensor



TECHNICAL DATA

OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
11 009 867	AGC 300 – 9 kW/3 × 230 V + HX 2.6m²	Ø595x1750	-	65	0.64	296	-	-	68	45	-	B	-

ACCU GEOCOIL - SYSTEM SCHEMATIC



Accu Geocoil AGC with HP and Saga STANDARD afterheater

PRESSURE DROP TABLE (mbar)

	OSO No.	Product name	540 L/h 0.15L/s	900 L/h 0.25 L/s	1 800 L/h 0.50 L/s	2 700 L/h 0.75 L/s	3 600 L/h 1.00L/s	4 500 L/h 1.25 L/s	5 400 L/h 1.50 L/s	kv-verdi m^3/time	
	11 009 867	AGC 300 – 9 kW/3 × 230 V + HX 2.6m^2	40	109	415	824	1 440	2 150	3 050	2.55	

MAXI - M

Heat accumulator tank in stainless steel for TURBO system

MADE IN NORWAY

MAXI — M is ideal for heat accumulation in commercial installations, for instance from other models in the MAXI series (MS/MX/MC/MGC), or directly from an external energy source by way of plate heat exchangers (not included.) Installation kits for cold water inlet with shut-off valve, hot water outlet with mixing valve, plate heat exchanger with pumps (TURBOSYSTEM) and piping for connecting multiple units has been custom-made to fit directly on the MAXI series.

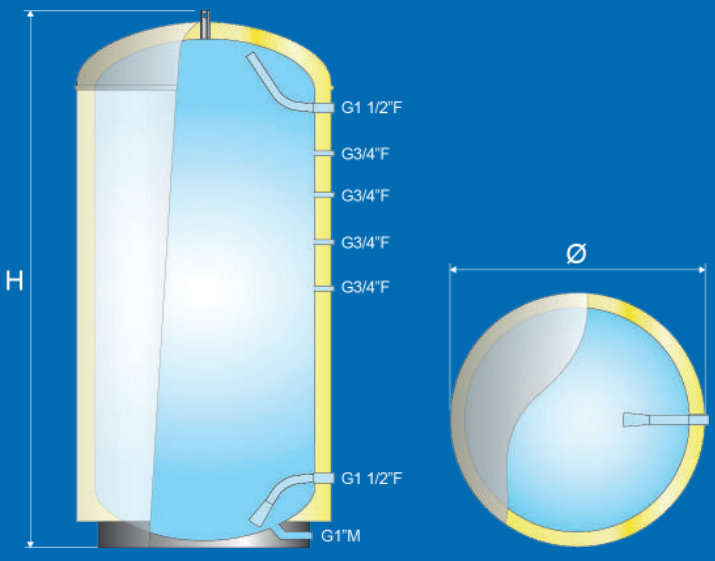
The commercial cylinders in the MAXI series have shown class-leading operational durability for commercial hot water systems through the last 50 years.

WHY MAXI?

- Accumulators provides optimal working conditions system
- Flexible choice of energy source with TURBOSYSTEM (add-on)
- 10 bar design pressure and class-leading corrosion resistance
- Capacities up to 10 000 litres on demand

KEY COMPONENTS

Mixing valve: See separate commercial add-ons
Safety valve: TP 9 bar/99 °C—¾" to drain
Flow/return conn.: 2 x G 1.½"F
Other conn.: 4 x G ¾"F



TECHNICAL DATA

OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
11 009 866	M 400	Ø595x2180	-	78	0.81	376	-	-	89	-	-	C	-
11 003 358	M 600	Ø800x2030	-	97	1.96	570	-	-	-	-	-	-	-
11 003 353	M 1 000	Ø1000x2120	-	176	3.07	885	-	-	-	-	-	-	-
11 003 354	M 2 000	Ø1290x2450	-	-	-	2 020	-	-	-	-	-	-	-

MAXI STANDARD - MS

Commercial hot water cylinder with unbeatable performance and lifetime economy

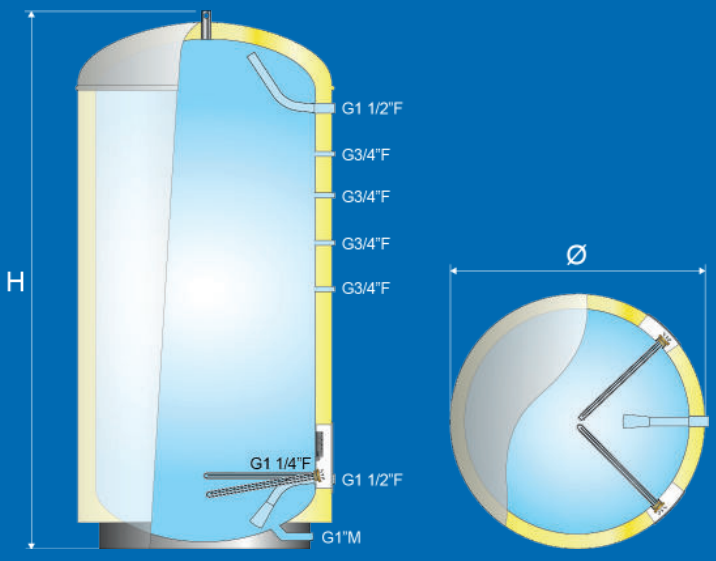
MADE IN NORWAY

MAXI STANDARD — MS — is suitable for most commercial domestic hot water demands, and is heated either with the integrated electric IN-COTEC immersion heaters, or via an external energy source and plate heat exchanger.
The electric immersion heaters comes with optional power 2.5–15 kW, 230–400 V + N 3-phase, and is thermostat controlled 50–75 °C in three steps with separate safety thermostats. Contactors are not required and the support cable is connected directly to the electric central. Installation kits for cold water inlet with shut-off valve, hot water outlet with mixing valve, plate heat exchanger with pumps (TURBOSYSTEM) and piping for connecting multiple units has been custom-made to fit directly on the MAXI series.

The commercial cylinders in the MAXI series have shown class-leading operational durability for commercial hot water systems through the last 50 years.

WHY MAXI STANDARD?

- Extreme operational durability with el. heaters w/o contactors
- Flexible choice of energy source with TURBOSYSTEM (add-on)
- 10 bar design pressure and class-leading corrosion resistance
- Capacities up to 10 000 litres on demand



KEY COMPONENTS

Mixing valve:	See separate commercial add-ons
Thermostat:	Justerbar 50–75 °C—Preset 75 °C
Safety valve:	PT 10 bar/90°C, G ¾"M
Flow/return conn.:	2 x G 1.½"F
Other conn.:	4 x G ¾"F

TECHNICAL DATA

OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
11 008 985	MS 400 - 2x7.5 kW/3x230V	Ø595x2172	-	79	0.81	372	771	-	90	75	-	C	-
11 009 827	MS 600 - 2x7.5 kW/3x400V	Ø800x2030	-	105	-	570	-	-	-	75	-	-	-
11 009 897	MS 1 000 - 2x7.5 kW/3x400V	Ø1000x2120	-	180	-	885	-	-	-	75	-	-	-
11 003 362	MS 2 000 - 30 kW/3x400V	Ø1290x2450	-	-	-	2 020	-	-	-	75	-	-	-

MAXI XPRESS - MX

High electric power for faster heating

MADE IN NORWAY

MAXI XPRESS—MX has greater electrical power than MS, and is heated either with the help of integrated electrical centrals (3x9kW) or via OSO TURBOSYSTEM. The electric immersion heaters comes with optional power 3–27 kW, 230–400 V + N 3-phase, are thermostatically controlled 50-75°C, and supply cables are connected directly in the electrical central. The electrical centrals are separated to avoid that maximum power is switched on at the same time, and this reduces the power factor with less hot water demand. An upper power central of 9kW will cover moderate consumption, while the lower power centrals are only switched on in stages when large hot water needs are needed. Safety valve is included and is dimensioned according to EN 1490.

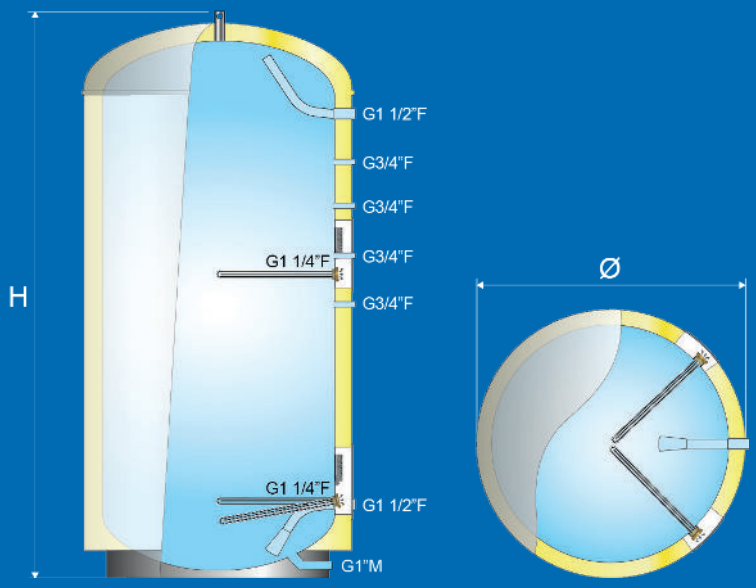
The commercial cylinders in the MAXI series have shown class-leading operational durability for commercial hot water systems through the last 50 years.

WHY MAXI XPRESS?

- Cost-effective installation with extreme operational reliability
- Flexible choice of energy source with TURBOSYSTEM (optional equipment)
- 10 bar pressure class and market-leading corrosion resistance
- Can be delivered up to 15,000 liters to order

KEY COMPONENTS

Thermostat:	Adjustable 50-75°C
Safety valve:	PT 10 bar/90°C, G ¾"M
Mixing valve:	Separate additional equip.
low/return conn.:	2 x G 1.½"F
Other conn.:	4 x G ¾"F



TECHNICAL DATA

OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
11 009 847	MX 600 - 3x9kW/3x400V	Ø800x2030	-	106	-	570	-	-	-	75	-	-	-
11 009 905	MX 1000 - 3x9kW/3x400V	Ø1000x2120	-	184	-	885	-	-	-	75	-	-	-

MAXI COIL - MC

Water heater with unbeatable performance and energy flexibility

MADE IN NORWAY

MAXI COIL—MC is ideal for electric operation in summer/boiler operation in winter, and is a good alternative to the TURBO system for smaller hot water needs. MAXI COIL has an integrated tube heat exchanger of 1.0m², and a capacity of up to 30kW from external high temperature energy source. The electric immersion heaters comes with optional power 2.5–15 kW, 230–400 V + N 3-phase, and is thermostat controlled 50–75 °C in three steps with separate safety thermostats. Contactors are not required and the support cable is connected directly to the electric central. Installation kits for cold water inlet with shut-off valve, hot water outlet with mixing valve, plate heat exchanger with pumps (TURBOSYSTEM) and piping for connecting multiple units has been custom-made to fit directly on the MAXI series.

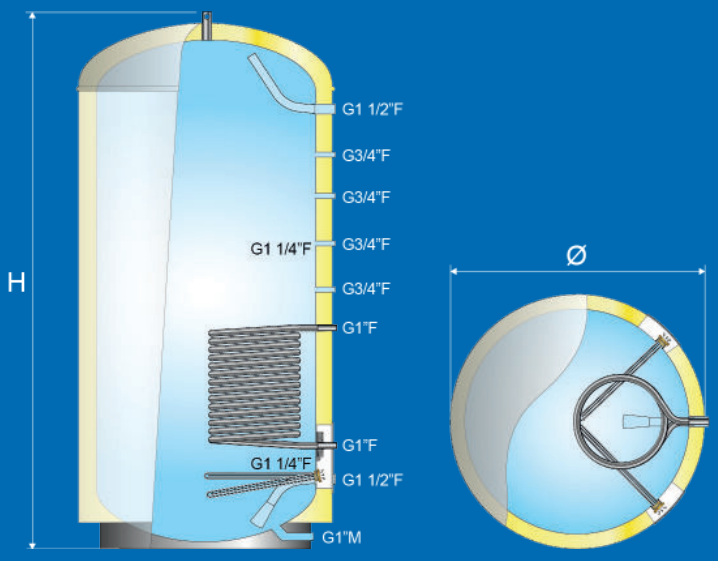
The commercial cylinders in the MAXI series have shown class-leading operational durability for commercial hot water systems through the last 50 years.

WHY MAXI COIL?

- Energy flexibility for summer / winter operation, or as back-up
- Extreme operational durability with el. heaters w/o contactors
- 10 bar design pressure and class-leading corrosion resistance

KEY COMPONENTS

Mixing valve:	See separate commercial add-ons
Thermostat:	Adjustable 50–75 °C—Preset 75 °C
Safety valve:	TP 10 bar/90 °C—¾" to drain
Flow/return conn.:	2 x G 1.½"F
Coil conn.:	G 1"F
Other conn.:	4 x G ¾"F



TECHNICAL DATA

OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
1 1 009 864	MC 600 - 2x 7.5 kW/3x400V+HX 1.0m²	Ø800x2030	-	114	-	568	-	-	-	75	-	-	-
1 1 009 915	MC 1000 - 2x7.5kW/3x400V+HX 1.0m²	Ø1000x2120	-	189	-	877	-	-	-	75	-	-	-

MAXI GEOCOIL - MGC

Custom designed for heat pumps up to 40 kW

MADE IN NORWAY

MAXI GEOCOIL — MGC — is custom-made for maximum hot water production from heat pumps up to 40 kW (400 L = 25 kW / 600 / 1 000 L = 40 kW), with the extremely large tube heat exchanger (400L = 3.1m² / 600L = 4.6m² / 1 000L = 7.0m²). The units are also suitable for solar collectors up to 40m². MAXI GEOCOIL features electric heating elements as booster raising the temperature above the heat exchanger to further increase capacity. The booster heaters also provides maximum safety vs. bacterial growth or if there are any operational problems with the energy source.
The electric immersion heaters comes with optional power 2.5–15 kW, 230–400 V + N 3-phase, and is thermostat controlled 50–75°C.

Installation kits for cold water inlet with shut-off valve, hot water outlet with mixing valve and piping for connecting multiple units has been custom-made to fit directly on the MAXI series.

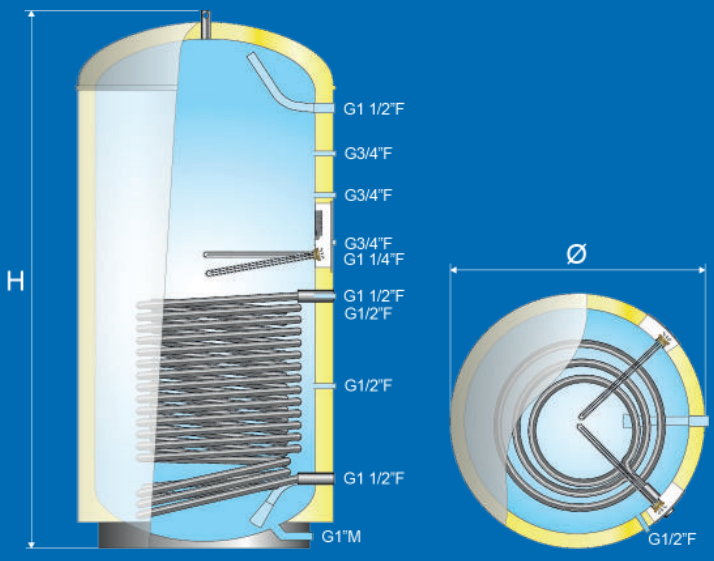
The commercial cylinders in the MAXI series have shown class-leading operational durability for commercial hot water systems through the last 50 years.

WHY MAXI GEOCOIL?

- Highly efficient DHW production from heat pumps up to 40 kW
- Extreme operational safety with electric heater as booster / back-up
- 10 bar design pressure and class-leading corrosion resistance

KEY COMPONENTS

Mixing valve:	See separate commercial add-ons
Thermostat:	Adjustable 50–75 °C — Preset 75 °C
Safety valve:	TP 9 bar / 99 °C — ¾" to drain
Flow/return conn.:	2 x G 1.½"F
Coil conn.:	2 × G ¾"F (400 L) / G 1"F (600–1 000 L)
Other conn.:	4 x G ¾"F



TECHNICAL DATA

OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
11 008 988	MGC 400 - 9 kW/3x230V + HX 3.1m²	Ø595x2172	-	95	0.81	362	-	-	96	75	-	C	-
11 009 918	MGC 600 - 2x7.5 kW/3x400V + HX 4.6m²	Ø800x2030	-	136	-	543	-	-	-	75	-	-	-
11 009 922	MGC 1 000 - 2x7.5 kW/3x400V + HX 7.0m²	Ø1000x2120	-	225	-	865	-	-	-	75	-	-	-

MAXI ACCU - MA COOL

Accumulator tank for cooling applications

MADE IN NORWAY

MAXI ACCU COOL – MA – is the ideal accumulator tank for storage of cold water from room climate systems with cooling machines where the cold water tank provides the necessary buffer volume for the system. The excess heat from the cooling machinery can provide virtually free hot water, if an accumulator tank as a preheater is installed, for example, MAGC. MAXI ACCU COOL features 19 mm. closed cell-foam insulation to prevent condensation from forming on the cold tank surface. Thanks to its low thermal conductivity and high resistance to water vapour diffusion, closed-cell foam insulation ensures high energy savings for the system. MAXI ACCU features dual sets of flow/return connections (400L = G2"F / 600L = DN80 / 1 000L = DN 100), which provide flexible connection and installation options, in addition to a separate G¾"F connection for air vents, G1"M drain connection as well as G½"F sensor connection.

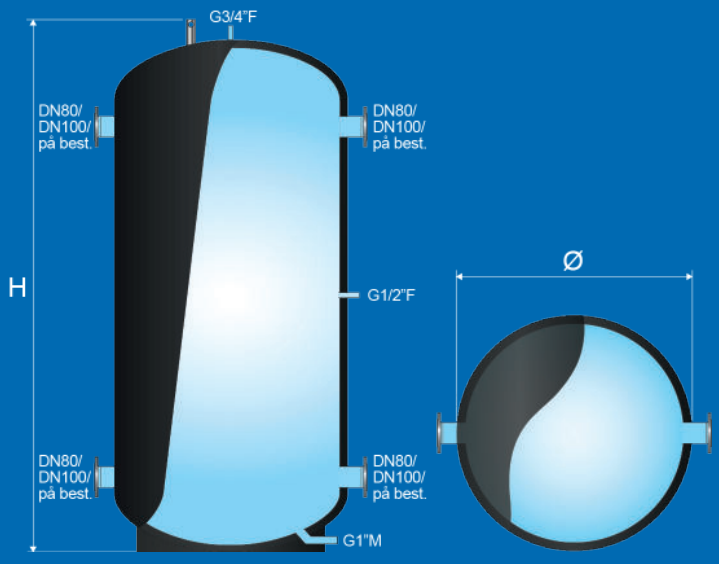
The commercial cylinders in the MAXI series have shown class-leading operational durability for commercial hot water systems through the last 50 years.

WHY MAXI ACCU COOL?

- Superior energy-efficiency
- Accumulators provides a stable hot water temperature for the system
- 6 bar design pressure
- Deliverable up to 10 000 liters on demand

KEY COMPONENTS

600 L.:	2 x DN80 PN10
1000 L.:	2 x DN100 PN10
Other conn.:	2 x G ½"F



TECHNICAL DATA

	OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
	11 009 866	M 400	Ø595x2180	-	78	0.81	376	-	-	89	-	-	C	-
	11 003 344	MA 600 COOL	Ø800x2030	-	98	-	570	-	-	-	-	-	-	-
	11 003 338	MA 1 000 COOL	Ø1000x2120	-	178	-	885	-	-	-	-	-	-	-
	11 003 340	MA 2 000 COOL	Ø1290x2450	-	-	-	2 020	-	-	-	-	-	-	-

MAXI ACCU - MA HEAT
Accumulator tank for heat

MADE IN NORWAY

MAXI ACCU HEAT – MA – is the ideal accumulator tank for storage of hot water from heat pump / solar collectors, ensuring optimal working conditions for the energy source and providing stable temperature to the system. MAXI ACCU features dual sets of flow/return connections (400L = G2"F / 600L = DN80 / 1 000L = DN 100), which provide flexible connection and installation options, in addition to a separate G¾"F connection for air vents, G1"M drain connection as well as G½"F sensor connection.

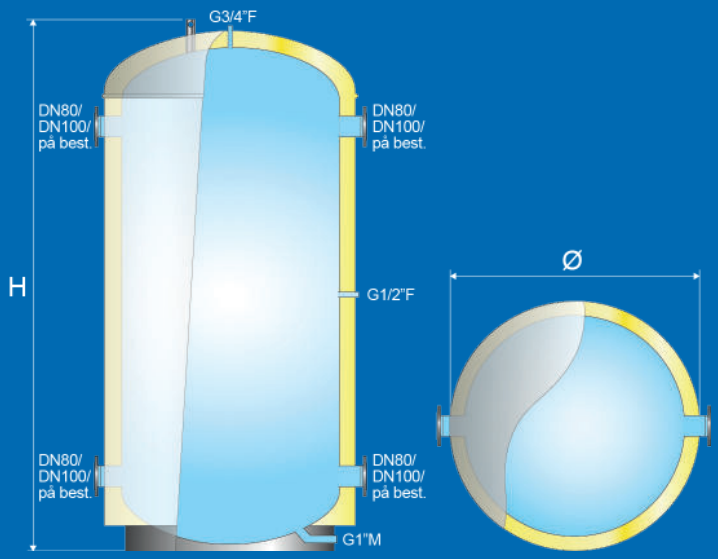
The commercial cylinders in the MAXI series have shown class-leading operational durability for commercial hot water systems through the last 50 years.

HVORFOR MAXI ACCU HEAT?

- Superior energy-efficiency
- Accumulators provides a stable hot water temperature for the system
- 6 bar design pressure
- Deliverable up to 10 000 liters on demand

KEY COMPONENTS

600 L.:	2 x DN80 PN10
1000 L.:	2 x DN100 PN10
Other conn.:	2 x G ½"F



TECHNICAL DATA

OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
11 009 866	M 400	Ø595x2180	-	78	0.81	376	-	-	89	-	-	C	-
11 003 351	MA 600 HEAT	Ø800x1900	-	98	-	550	-	-	119	-	-	C	-
11 003 345	MA 1 000 HEAT	Ø1000x2100	-	178	-	885	-	-	140	-	-	C	-
11 003 347	MA 2 000 HEAT	Ø1290x2450	-	-	-	2 020	-	-	-	-	-	-	-

MAXI ACCU GEOCOIL - MAGC

Accumulator tank with preheating of domestic hot water

MADE IN NORWAY

MAXI ACCU GEOCOIL – MAGC – is specially designed as a heat accumulator tank for heat pumps or solar collectors, with preheating of domestic hot water by using the large tube heat exchanger (4.0m²). MAXI ACCU GEOCOIL can also be connected to a heat pump with domestic hot water prioritization up to 30 kW, or to solar collectors with a plate heat exchanger in between. With preheating of the domestic hot water, MAXI ACCU GEOCOIL ensures improved operating conditions for the heat pump, higher domestic hot water capacity and stable temperature of the system. The tube heat exchanger preheats the cold water and lowers the return temperature of the heat pump or solar collectors significantly, thereby increasing the efficiency (COP).

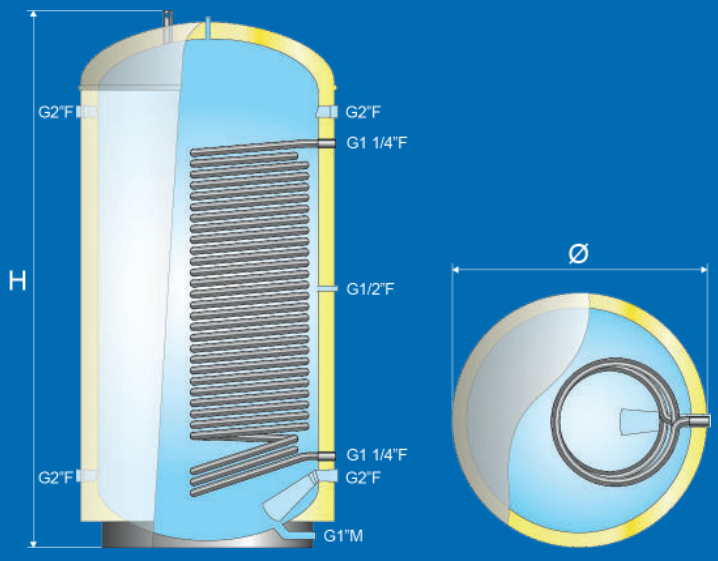
The commercial cylinders in the MAXI series have shown class-leading operational durability for commercial hot water systems through the last 50 years.

WHY MAXI ACCU GEOCOIL?

- Accumulator tank for heat pumps or solar collectors
- Large preheating capacity of domestic hot water provides better COP
- 10 bar pressure class and market-leading corrosion resistance

KEY COMPONENTS

Mixing valve: See separate commercial add-ons
Safety valve: TP 9 bar / 99 ° C - 3/4" overflow to drain
Flow/return conn.: 2 x G 1"F
Other conn.: 4 x G 2"F



TECHNICAL DATA

	OSO No.	Product name	Dia x Height mm.	Cap. pers.	Wt. kg.	Freight vol. m³	Volume L	Volume L/40 °C	AEC kWh/år	Heat loss W	Therm. set point °C	Ener. eff. %	Rating ErP	Prof. ErP
	11 003 229	MAGC 600 - HX 4.0m²	Ø800x2030	-	131	1.96	544	-	-	-	-	-	-	-
	11 003 237	MAGC 1 000 - HX 4.0m²	Ø1000x2100	-	223	3.07	870	-	-	175	-	-	E	-

CERTIFIED AND DEDICATED

Today, certification according to current international standards is absolutely necessary to enter the market. OSO started early with this process and is certified in accordance with all current standards and directives for our field:

- ISO 9001 - Quality
- ISO 14001 - Environment
- ISO 45001 - Working environment and internal security

Our products are designed and manufactured according to

- EN-ISO 3834-2 - Standard for welding quality
- PED 2014/68/EU - Directive for the production of pressure tanks
- EN 60335-2-21 - Safety standard

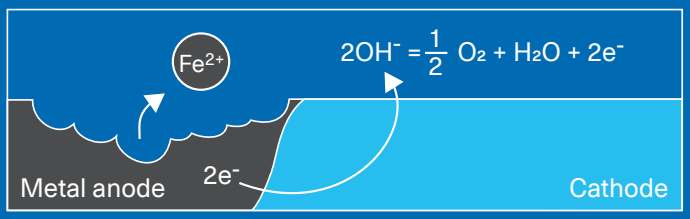
IMPORTANT FACTS ABOUT CORROSION

1. TDS / CONDUCTIVITY

The term TDS describes all solids (usually mineral salts) that are dissolved in water. The TDS and the electrical conductivity are in a close connection. The more salts are dissolved in the water, the higher is the value of the electric conductivity. The majority of solids are dissolved ions.

Conductivity is a measure of water's capability to pass electrical current. This ability is directly related to the concentration of ions in the water (also known as electrolytes.) The more ions that are present, the higher the conductivity of water. Likewise, the fewer ions that are in the water, the less conductive it is.

TDS and electrical conductivity (EC) are in a close connection. TDS, in mg/L, is in fresh water systems approximately 65 %* of specific conductivity** in S / cm (microsiemens).



** The exact conversion value between TDS and EC depends on the chemical composition of the water, specifically pH, bicarbonate and TDS.*

*** Specific conductance is a conductivity measurement made at or corrected to 25° C. If a measurement is made at a different temperature and corrected to 25° C, then the temperature coefficient must be considered.*

Each electrolyte contributes differently to the conductivity (resistivity) of the water:

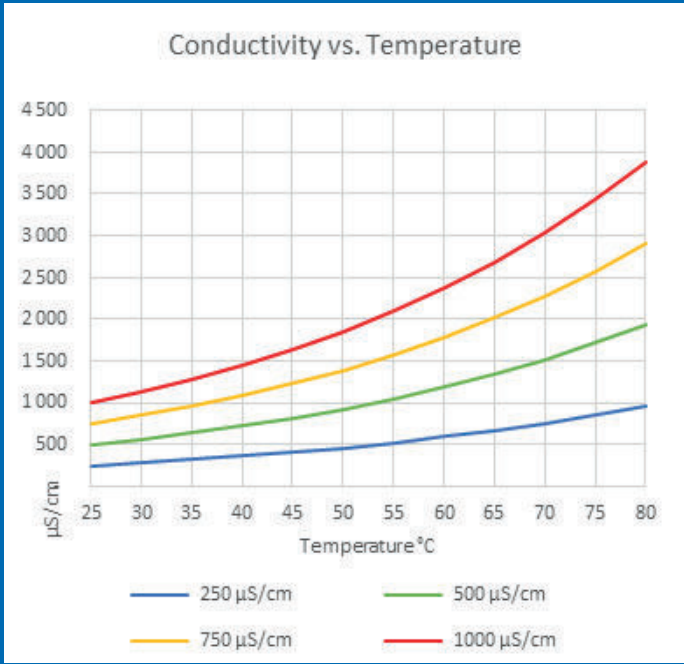
Cl-	Chloride	2,14 Ω/cm per mg/L
SO4	Sulphate	1,54 Ω/cm per mg/L
NO3	Nitrate	1,15 Ω/cm per mg/L
HCO3	Bicarbonate	0,72 Ω/cm per mg/L

There is much evidence to suggest that in addition to its effect on conductivity (see below), chloride ions specifically accelerate pitting in ferrous metals, particularly stainless steels.

The conductivity of the water determines how swiftly the ions can exchange. The higher the conductivity, the faster the exchange of ions. In pitting corrosion, the pit will assemble ferrite (iron) and function as the anode vs. the stainless steel around the pit which will be the cathode. This occurs due to the difference in electric potential between the anode and the cathode, even between small areas on the same metal sheet.

2. TEMPERATURE

Temperature increases the conductivity of water due mainly to higher concentrations of the highly conducting H+ and OH- ions. (So-called dissociation)



The water temperature affects the electric conductivity so that its value doubles pr. 10°C. For a water heater, this creates a particularly aggressive environment due to elevated temperatures.

3. O_2 CONCENTRATION

The passive layer on the stainless steel requires presence of oxygen to be able to self-repair and re-form chromium oxides (see part one). Hence, stainless steel exposed to environments with a low oxygen content and reduced water flow will exhibit much reduced corrosion resistance than normal.

Hardness class	°dH
Very soft water	0 - 2,1
Soft water	2,1 - 4,9
Medium hard water	4,9 - 9,8
Hard water	9,8 - 21
Very hard water	> 21

In an environment where there is low oxygen content in addition to presence of chlorides that will attack the stainless steel, the passive layer will be broken down at a faster rate than it is able to self-repair and re-form the damaged passive layer caused by the chlorides.

The water temperature affects the oxygen content in the water (dissolved oxygen). The higher the temperature, the lower the amount of dissolved oxygen. For a water heater this means a reduced level of dissolved oxygen and a particularly aggressive environment due to the elevated temperatures.

WARRANTY CONDITIONS

1. Scope

OSO Hotwater AS ("OSO") warrants for 2 years from the date of purchase, that the Product will: i) conform to OSO specification, ii) be free from defects in materials and workmanship, subject to conditions below. All components carry a 2-year warranty.
The warranty is voluntarily extended by OSO to 5 years for the stainless steel inner tank. This extended warranty only applies to Products purchased by a consumer, that has been installed for private use and that has been distributed by OSO or by a distributor where the Products have been originally sold by OSO.
The extended warranty does not apply to Products purchased by commercial entities or for Products that have been installed for commercial use. These shall be subject only to the mandatory provisions of the law. The conditions and limitations set out below shall apply.

2. Coverage

If a defect arises and a valid claim is received within the statutory warranty period, at its option and to the extent permitted by law, OSO shall either; i) repair the defect, or; ii) replace the product with a product that is identical or similar in function, or; iii) refund the purchase price.
If a defect arises and a valid claim is received after the statutory warranty period has expired, but within the extended warranty period, OSO will supply a product that is identical or similar in function. OSO will in such cases not cover any other associated costs.
Any exchanged Product or component will become the legal property of OSO. Any valid claim or service does not extend the original warranty. The replacement Product or part does not carry a new warranty.

3. Conditions

The Product is manufactured to suit most public water supplies. However, there are certain water chemistries (outlined below) that can have a detrimental effect on the Product and its life expectancy. If there are uncertainties regarding water quality, the local water supply authority can supply the necessary data.
The warranty applies only if the conditions set out below are met in full:

- The Product has been installed by a professional installer, in accordance with the instructions in the installation manual and all relevant Codes of Practice and Regulations in force at the time of installation.
- The Product has not been modified in any way, tampered with or subjected to misuse and no factory fitted parts have been removed for unauthorized repair or replacement.
- The Product has only been connected to a domestic mains water supply in compliance with the European Drinking Water Directive EN 98/83 EC, or latest version.
- The water should not be aggressive, i.e. the water chemistry shall comply with the following:
  - Chloride < 250 mg / L
  - Electrical conductivity (EC) @25°C < 750 uS / cm
  - Saturation index (LSI) @80°C > - 1.0 / < 0.8
  - pH level > 6.0 / < 9.5
- The immersion heater has not been exposed to hardness levels exceeding 10°dH (180 ppm CaCO3). A water softener is recommended in such cases.
- Any disinfection has been carried out without affecting the Product in any way. The Product shall be isolated from any system chlorination.
- The Product has been in regular use from the date of installation. If the Product is not intended to be used for 60 days or more, it must be drained.
- Service and/or repair shall be done according to the installation manual and all relevant codes of practice. Any replacement parts used shall be original OSO spare parts.
- Any third-party costs associated with any claim has been authorized in advance by OSO in writing.
- The purchase invoice and/or installation invoice, a water sample as well as the defective product is made available to OSO upon request.

Failure to follow these instructions and conditions may result in product failure, and water escaping from the Product.

4. Limitations

The warranty does not cover:

- Any fault or costs arising from incorrect installation, incorrect application, lack of regular maintenance in accordance with the installation manual, neglect, accidental or malicious damage, misuse, any alteration, tampering or repair carried out by a non-professional, any fault arising from the tampering with or removal of any factory fitted safety components or measures.
- Any consequential damage or any indirect loss caused by any failure or malfunction of the Product.
- Any pipework or any equipment connected to the Product.
- The effects of frost, lightning, voltage variation, lack of water, dry boiling, excess pressure or chlorination procedures.
- The effects of stagnant (de-aerated) water if the Product has been left unused for more than 60 days consecutively.
- Damage caused during transportation. Buyer shall give the carrier notice of such damage.
- Costs arising if the Product is not immediately accessible for servicing.

THESE WARRANTIES DO NOT AFFECT THE BUYER'S STATUTORY RIGHTS.

World class hot water
cylinders since 1932

OSO HOTWATER AS, INDUSTRIVEIEN 1, NO-3300 HOKKSUND
TEL: +47 32 25 00 00 / E-POST: EXPORT@OSOHOTWATER.COM / WWW.OSOHOTWATER.COM

146004-09