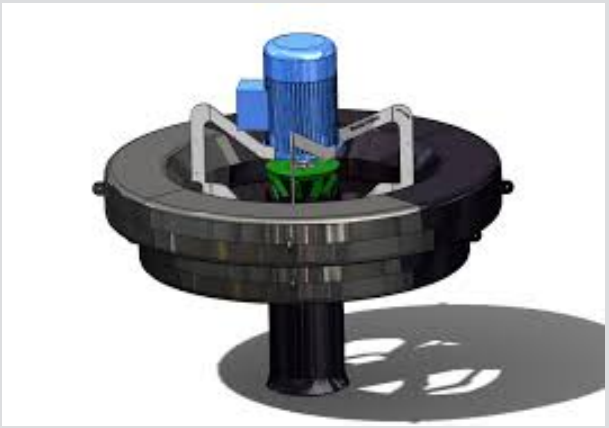
Makoswater
...nature is the key

W-RIX AERATORS MIXERS AND COOLERS

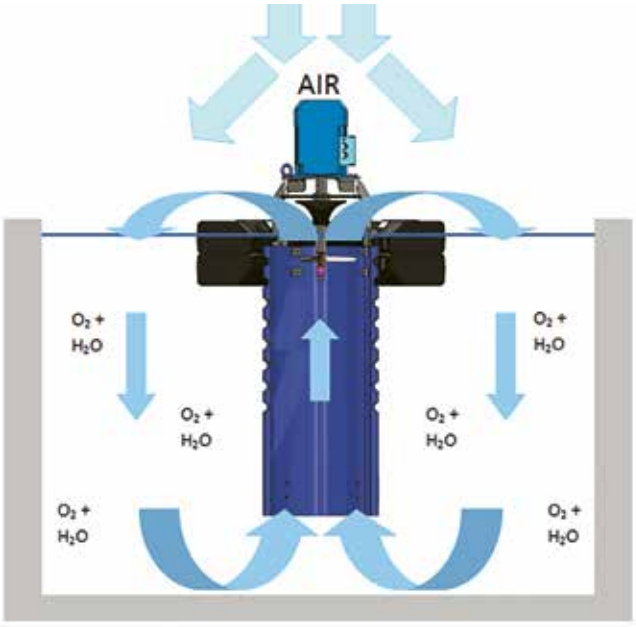


AIRIT®

AIRIT® is a floating aerator for aeration and mixing of industrial and municipal wastewater.
It can also be used for leachate waters from landfills, and the aeration of natural waters, fish farms and golf course ponds.

AIRIT® combines the high operating efficiency and controllability of diffusers with the reliability and low investment cost of surface aerators.

SIGNIFICANT SAVINGS
AIRIT® drives oxygen into the wastewater and then disperses and mixes the oxygen-enriched water in the basin. Its wide intake pipe prevents clogging enabling effective circulation of water through the aerator and reducing the need for maintenance. The oxygen transfer efficiency is continuously maintained without the need for compressed air, keeping energy and general lifecycle costs low.



		A70	A130	A200	A450	A900	A1100	A1700	A2100
Motor	kW	1.5	3.0	5.5	11.0	22.0	30	45	55
Standard Aeration Eff. (SAE)	kgO2/ kWh	2.2	2.0	2.0	2.0	2.1	2.0	2.0	2.0
Water flow	l/s	69	125	230	460	890	1200	1820	2200
Spray Diameter	m	3.5	4.5	5	5.5	7	7.5	8	8.5
Weight with floats	kg	40	110	160	360	560	700	1200	1300

The results have ±15% accuracy.

COOLIT®

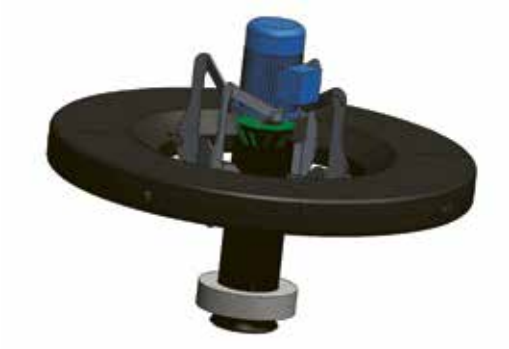
COOLIT® is a floating spray cooler for hot industrial wastewater, process liquids or power plant condensed water. Technology is based on evaporation of water into the air.

SIGNIFICANT SAVINGS

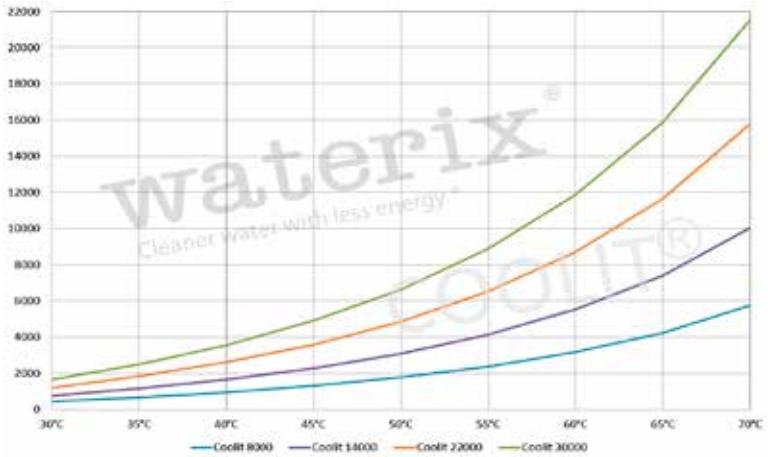
Unlike cooling towers, **COOLIT®** has only one motor. **COOLIT®**'s high-speed water flow creates an important air flow that removes the needs for extra fans. This means lower energy consumption and less maintenance.

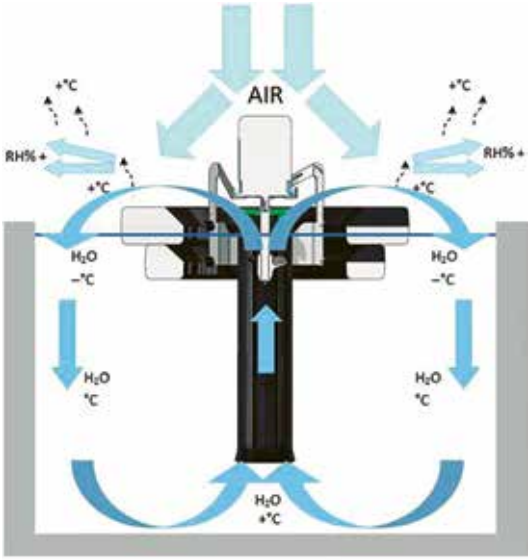
The size, speed and shape of the water and air spray as well as droplet size are optimized to achieve the maximum cooling effect using minimum electric power. Its high operational efficiency, with aeration and cooling performed by the same device, reduces investment costs and ensures low energy consumption.

https://www.youtube.com/watch?v=7vDT2qdprho



COOLIT® cooling output [kW] in different water temperatures
Air temperature 20°C and relative humidity 60%





		C8000	C14000	C22000	C30000
Cooling output	kg air/s	8.0	14.0	22.0	30.0
O2 Transfer Rate	kgO₂/d	48	72	110	145
Motor	kW	2.2	4.0	5.5	7.5
Water flow	l/s	55	80	130	175
Spray diameter	m	8	13	14	16
Weight with floats	kg	55	80	110	130

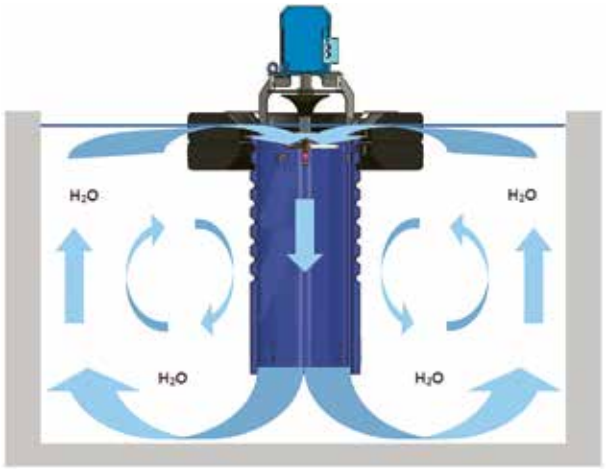
The results have ±15% accuracy.

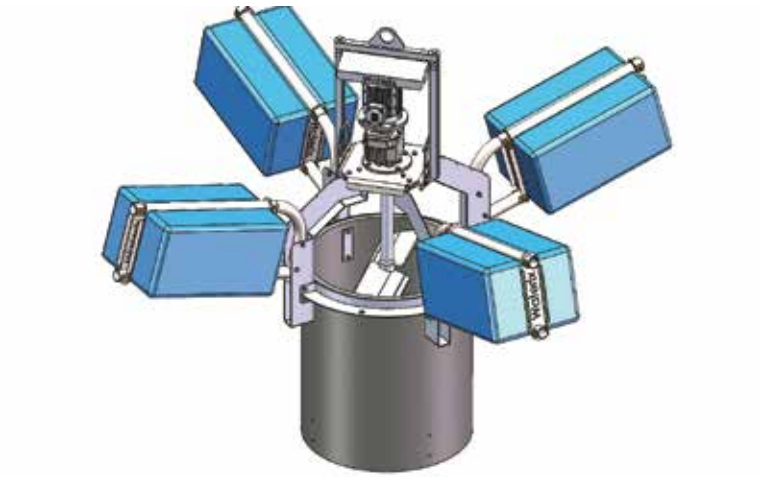
MIXIT®

MIXIT® is reliable technology for the efficient mixing of municipal and industrial wastewater.
It can also be used to mix leachate from landfills and for the quick mixing of chemicals in liquids.

SIGNIFICANT SAVINGS
MIXIT®'s downward flow pipe directs water to the bottom of the basin to increase mixing efficiency.
With a downward flow pipe, only a short shaft is needed. This preserves the motor's bearings and increases the lifetime of the equipment.

The motor has no contact with the water, which in turn increases its reliability and reduces the need for maintenance.





		DIRECT DRIVE			GEAR BOX		
		M150	**M400**	**M1200**	**M-G 1.1**	**M-G 3.0**	**M-G 7.5**
Thrust	N	150	410	1200	310	800	1600
Motor	kW	1.1	2.2	7.5	1.1	3.0	7.5
Water flow	l/s	45	190	600	370	600	800
Weight with floats	kg	40	150	350	270	300	350

The results have ±15% accuracy.

DENIT™

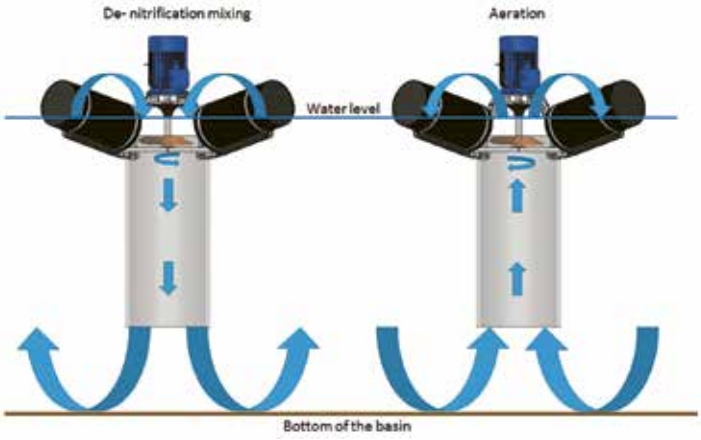
DENIT™ combination devices are an optimal device where the municipal or industrial wastewater aeration and mixing is needed to alternate.

SIGNIFICANT SAVINGS
When the water flows from bottom to surface the DENIT™ aerates and mixes the water. As soon as the impeller rotation direction is changed and water starts to flow from surface to bottom, the aeration stops and unit acts only as a powerful mixer.

DENIT™ will be used with a frequency converter.
This makes it possible to adjust aeration and mixing power to achieve the optimal profile with the lowest possible energy consumption.

DENIT™ in aeration mode.

DENIT™ in mixing mode.



		D400A/M	D800A/M	D1600A/M	D2100A/M	D4000A/M
Oxygen Transfer Rate in aeration mode	kgO2/h	8.3/6.6	16.5/13.2	33.0/26.4	45.0/36.0	82.5/66.0
Motor	kW	5.5	11	22	30	55
Thrust in mixing mode	N	320/400	640/800	1280/1600	1680/2100	3000/4000
Weight with Floats	kg	160	400	560	600	1300

The results have ±15% accuracy.

APPLICATIONS & BENEFITS

WATERIX® Applications	Airit®	Coolit®	Mixit®	Denit™
Industrial Wastewater Treatment	√	√	√	√
Municipal Wastewater Treatment	√	√	√	√
Cooling of Industrial hot process waters	√	√		
Removal of harmful gases	√	√		
Landfill and other leachate waters	√		√	√
Natural Waters (lakes, ponds, rivers)	√	√	√	√
Agriculture and aquaculture	√	√	√	√
Retrofitting and upgrading programs	√	√	√	√

WATERIX® Benefits	Airit®	Coolit®	Mixit®	Denit™
Low energy consumption	√	√	√	√
No need for extensive infrastructure	√	√	√	√
Low initial investment costs	√	√	√	√
High oxygen transfer rate	√			√
Excellent mixing capacity	√		√	√
Excellent cooling capacity		√		
Easy to install without emptying the basin	√	√	√	√
Easy to add capacity to basin later	√	√	√	√
Minimal maintenance	√	√	√	√
Automatic cleaning sequence of impeller	√	√	√	√
Process optimization expertise	√	√	√	√
Alternative for retrofitting and replacement	√	√	√	√

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