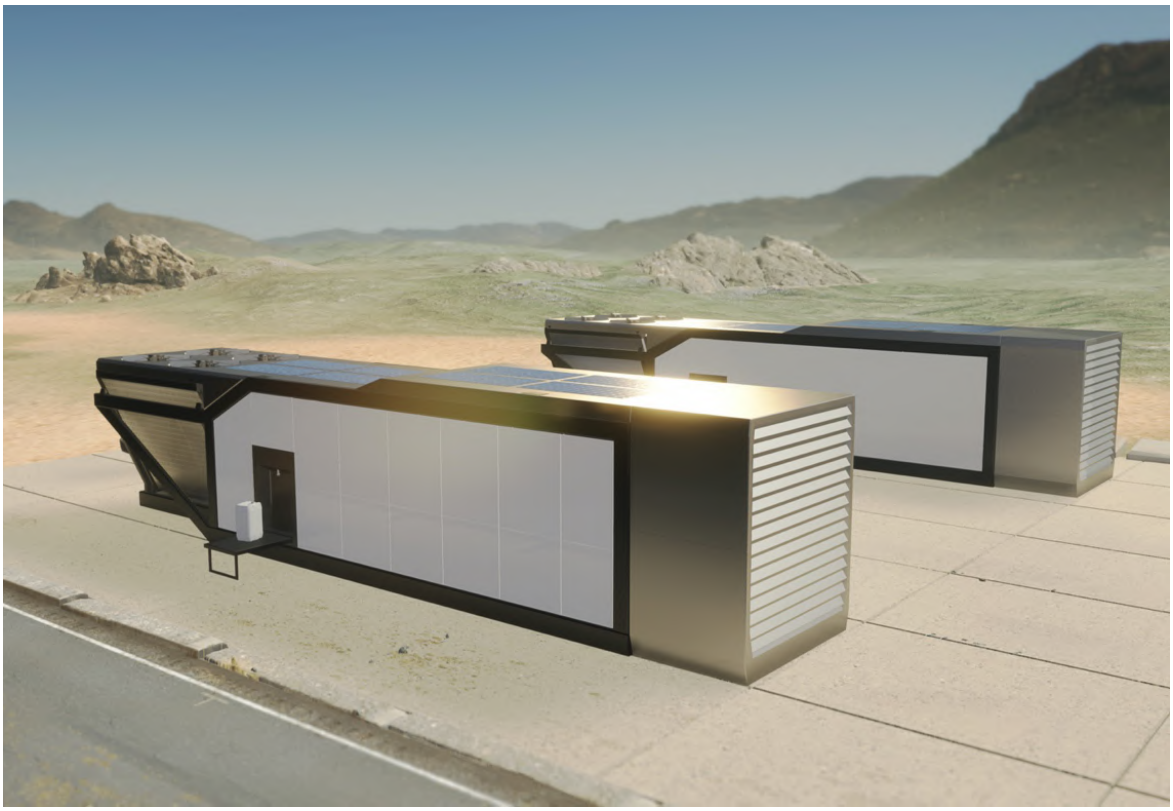
PHANTOR

THE MOBILE WATER GIANT

TECHNICAL DATASHEET



In response to the growing demand for new ways to generate drinking water and based on the latest scientific findings, the team around Walter Kreisel develops an atmospheric water generator.

The Mobile Water Giant PHANTOR marks a new category in the field of atmospheric water generators. PHANTOR, as a high-performance mobile AWG, is designed for both stationary and semi-stationary use, unlike most conventional atmospheric water generators.

PHANTOR can extract up to 10,000 liters of drinking water from the air daily and thus belongs to the biggest AWGs.

The innovative design of the system and the integrated self-optimizing software set new standards in the field of energy efficiency of atmospheric water generators. This shows the years of experience in the field of energy systems and renewable energies of neoom group gmbh, the company behind the project. With PHANTOR, the concentrated know-how of the neoom hardware and NTUITY software team is driven to perfection.

PHANTOR is named after the elephant, who can smell water for several kilometers and even drill for it.

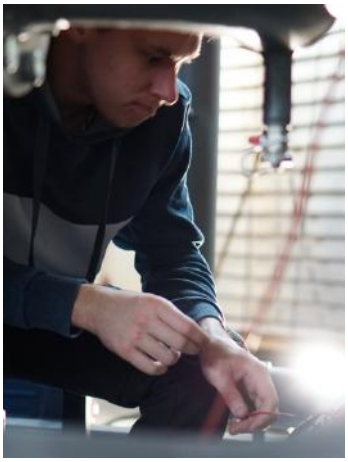
AWGs are used where water scarcity is a daily challenge: in remote locations, in dry regions or agricultural areas, during peacekeeping operations and catastrophes, but also for urban development.

Technical data	
Length	12 m
Width	2.28 m
Height	2.65 m
Weight	14,300 kg
Power supply	max 120 kW (400V, 50Hz) 4.8 kWh neoom® Li-ion off grid battery system for autonomous emergency power supply
	Oil free chiller system, contact free magnetic bearings for highest efficiency and low maintenance
Water treatment	Combi filter, UV-disinfection, mineralization, bacterial filter. Verified drinking water (above WHO standards)
Integrated water tank	1,000 Liters
Integrated photovoltaics	1.5 kW power
Housing	Suitable for installation near the cost. Housing and steel structure in C5 coating
Measuring control technology	State of the art PLC with NTUITY® Link On Board (including visualization and remote control)

The thermodynamic simulation model of PHANTOR was developed in cooperation with the **University of Applied Sciences Upper Austria**. Tests in the climatic chamber of the accredited test center **Rail Tec Arsenal** confirm the outstanding function of PHANTOR and show that the real results are in agreement with the simulation model.

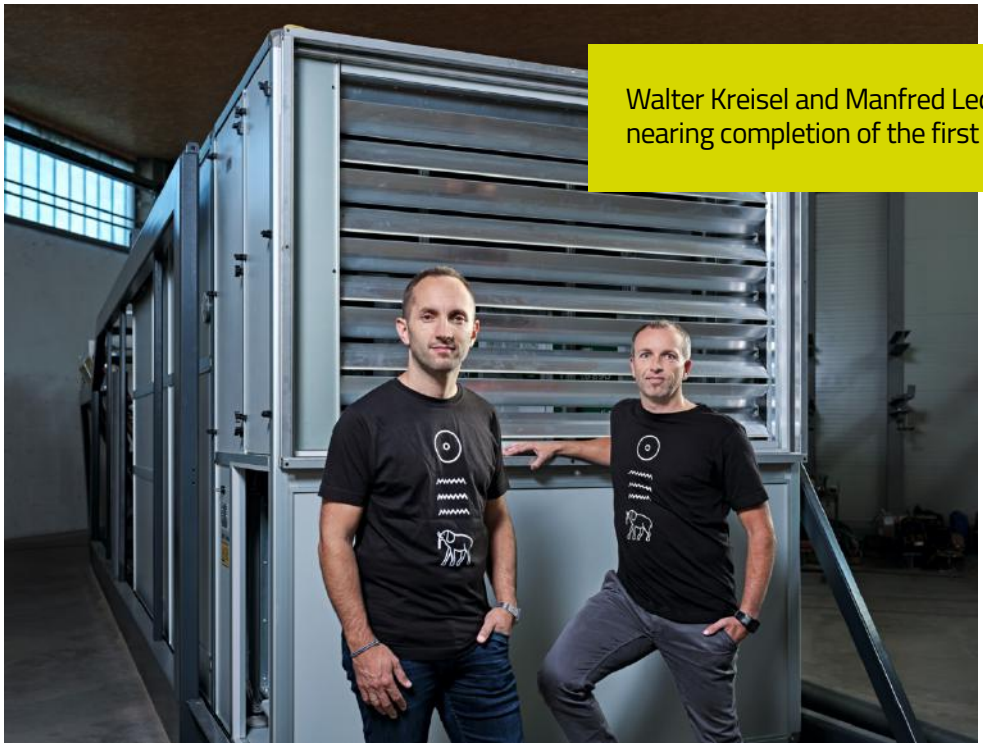
rel. F [%]	**Waterproduction per 24 hours**											Rail Tec Arsenal Austria	
95		2 055	3 071	4 039	5 127	6 351	7 775	9 396	10 240	10 168	10 674	10 890	7 573
85			2 435	3 293	4 279	5 361	6 574	7 977	8 779	9 078	8 672	9 117	6 143
75			1 821		3 454	4 418	5 522	6 603	7 641	7 769	8 067	7 629	4 938
70				2 218									
65					2 603	3 449	4 416	5 469	6 567	6 699	6 689	6 685	4 634
55						2 479	3 308	4 228	5 201	6 334	6 981	6 316	4 764
50							2 741						
45								2 936	3 754	4 683	5 711	6 274	4 428
40									3 016	3 693	4 779		
35												4 747	4 186
30													3 717
[°C]	0,01	12,50	15,00	17,50	20,00	22,50	25,00	27,50	30,00	32,50	35,00	37,50	40,00

rel. F [%]	**Energyefficiency in Watthours per litre**											Rail Tec Arsenal Austria	
95		427	327	289	285	282	260	260	211	210	194	183	206
85			394	328	310	301	308	268	249	253	252	229	264
75			454		351	329	331	365	323	319	289	283	338
70				461									
65					416	383	354	352	379	366	357	338	373
55						479	419	389	395	384	377	378	394
50							459						
45								484	467	443	432	425	459
40									539	499	468		
35												495	532
30													582
[°C]	0,01	12,50	15,00	17,50	20,00	22,50	25,00	27,50	30,00	32,50	35,00	37,50	40,00



As the world population continues to increase massively and water consumption increases even faster, the demand for mobile water generators is growing.

For years the World Economic Forum's Global Risks Report is reporting that the global water crisis is one of the greatest threats humanity will face over the next few decades. Global warming is changing freshwater lakes, rivers and streams. Groundwater is under threat from fracking, oil fields and oil transport, reports Greenpeace. This means that humanity needs "new water", e.g. through atmospheric water generators. PHANTOR, the mobile water giant, provides millions of people access to safe drinking water through state-of-the-art technologies and renewable energy.



Walter Kreisel and Manfred Ledermüller nearing completion of the first PHANTOR.

neoom group gmbh

The neoom group has recognized the megatrends of decarbonisation, digitization, decentralization and e-mobility at all levels, thus taking the necessary energy transition to a new level. From renewable energy sources to efficient storage technologies and charging infrastructure with the neoom® brand (neoom.com) to the intelligent NTUITY® energy management software platform (ntuity.io), the neoom group offers comprehensive concepts and products that are tailored to the needs of the customer.