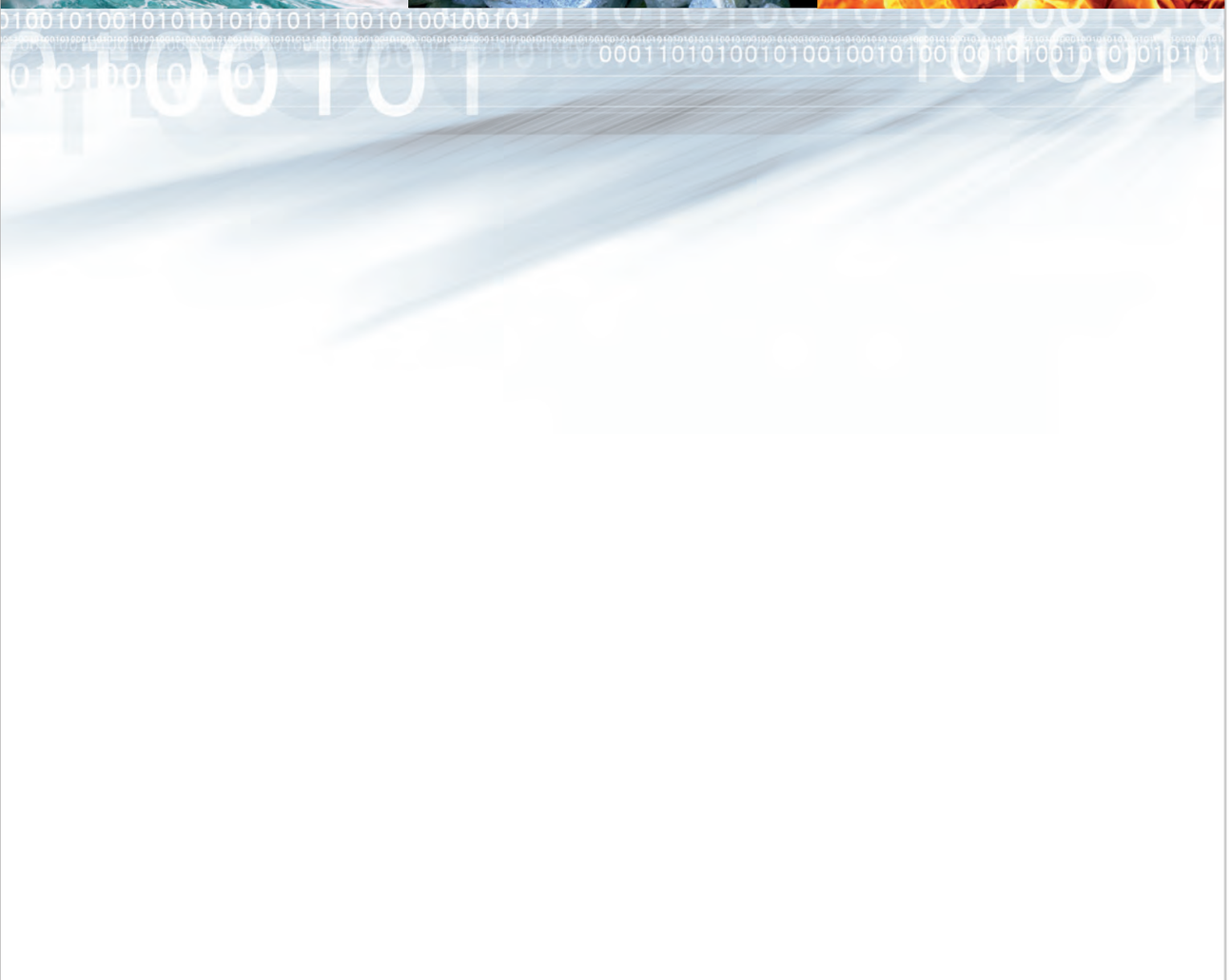
The Secure Data Safeguard.

Noah. The black-box principle for your desk.

NOAH
DATA STRONGROOM

Data security is security for your livelihood.

Loss of data threatens your existence. Yet the risk is controllable with the right system.



34% of companies forget to test their tape backups.

77% of companies who test their tape backups, find bugs in them.

31% of PC users have lost all their data because of a crash.

60% of companies who incur a loss of data, close down within six months.

30% of all companies close down within one year after a fire.

70% of all companies who are exposed to a fire close down within five years.

93% of all companies who have lost their data-centre for ten days or more by accident, fail within one year.

50% of the companies who have lost their data centre for ten days or more by accident, fail immediately.

Permanent access

Not only large companies, but also medium-sized enterprises, freelancers and small-scale enterprises use computers and are therefore dependent on the permanent availability of their data. Problems in data access rapidly affect their operations and, in the worst case, cripple the company completely.

Consequences of loss

Especially massive losses of data by burning, flood, sabotage or natural catastrophe have extensive consequences. 93% of all companies who have no data access for ten days, become insolvent within a year, half of them immediately. The backup of company data is essential for the existence of a company.

Careless Backup

Not all backup strategies are equal. Although data backup is taken more seriously than just a few years ago often the backup strategy shows hazardous deficiencies. While it is a matter of course to store important documents or cash in a safe, sensitive data are “backed up” on unprotected computers, servers or media, often at the same location. The fact that, in case of fire, the backup is destroyed along with the original data is not realised. A really dangerous situation!

Recovery without guaranty

Recovery of damaged data, if at all possible, involves a great deal of time by specialists and can cost five- or six figure sums with no guaranty of success. Not included in the calculation are losses due to production or sales failures or loss of orders.

Attempts at prevention

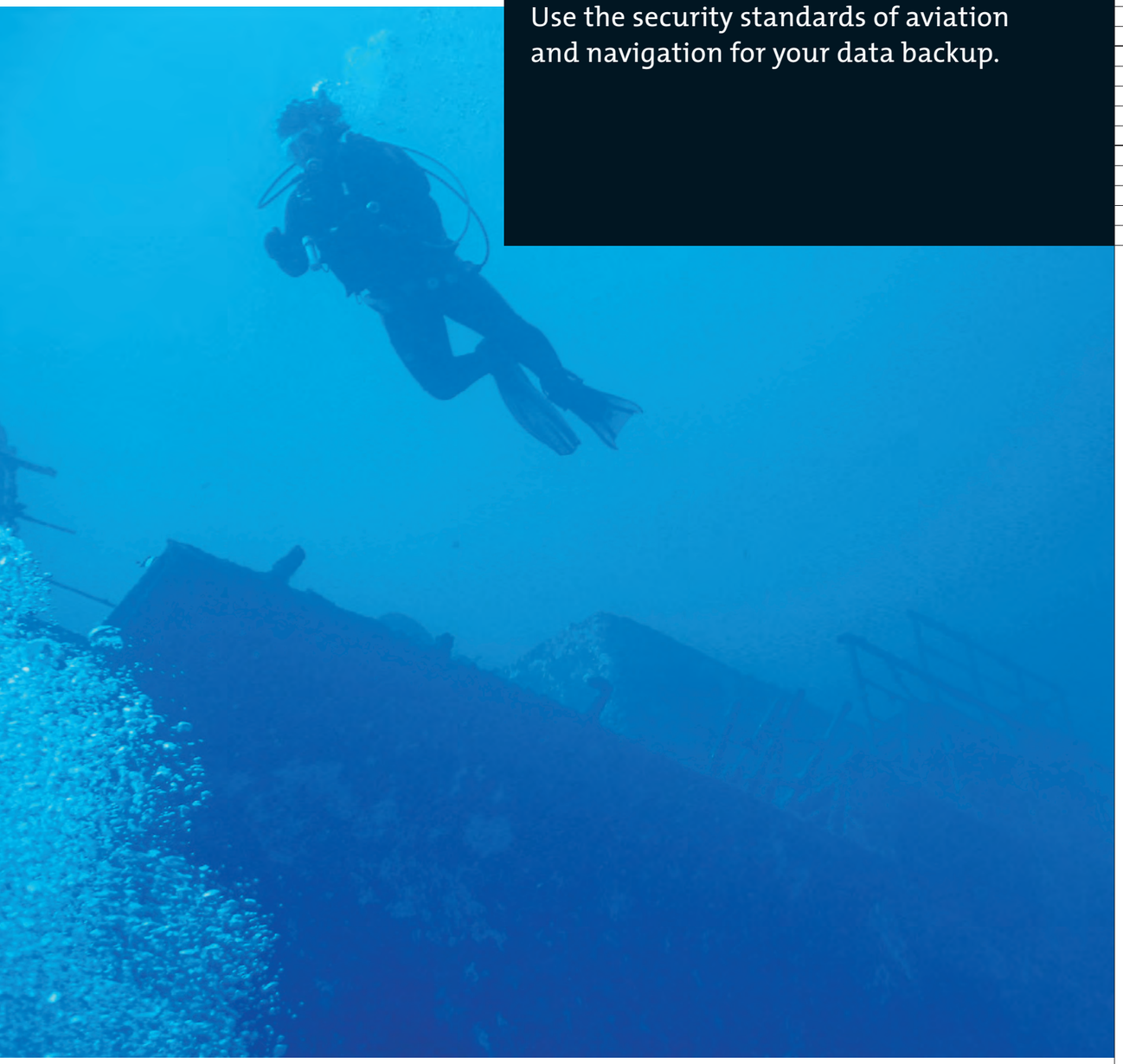
The maximum credible accident can be prevented by appropriate systems. For example by specially fire-proof and secured IT-rooms inside the company; an expensive solution. While it is true that an online backup (cloud-computing) is much cheaper, on closer inspection this solution is not convincing. Firstly, the backup mostly runs very slowly, sensitive data flow through insecure transmission lines, requiring hard encryption, and finally, data are stored at unknown remote locations, inherently vulnerable to misuse.

Noah is the answer

The high-security storage system Noah Data Strongroom eliminates the drawbacks of previous backup concepts and resists even the hardest external influences.

Safe as the ‘black box’.

Use the security standards of aviation and navigation for your data backup.



Noah is the watertight answer.
The deep sea immersion test provides the evidence: Noah is exposed to a pressure of 600 bar for a minimum of 24 hours to confirm survival at 6000 meters. The high corrosion resistance is indicated by the sea-water test. 30 days in salt-water at a depth of 3 meters.

	Noah-Test	Verification	Conditions		Testing Standards	
					IEC	EUROCAE
	Deep Sea Test	Resistance to pressure	Duration	24 hours	61996	ED112
		and impermeability	Pressure	600 bar	60945	ED 55
			Sea depth	ca. 6000 meters		ED 56A
	Sea-water test	Corrosion resistance	Duration	30 days		
			Depth	3 meters		
			Medium	Salt water		
	Fire test	Fire resistance	Duration	1 hour		
			Temperature	1,100 °C		
			Min. thermal flux	158 kW/m²		
	Oven Test	Heat resistance	Starting-temperature	20°C		
			Heating up phase	2 hours		
			Test temperature	260 °C		
			Test Duration	12 hours		
	Crash test	Shock resistance	Weight	250kg		
			Action	Free fall		
			Height	3 meters		
			Collision area	D 100 mm		

International standards as benchmark

Every passenger plane has several examples on board and more and more sea-going vessels are equipped with 'black boxes'. The voyage data recorders and flight data recorders continuously store the relevant data and communications; in case of an accident, its causes are ascertained from the last records. Placed in armour-cased housings, the data of the memory units are readable even after a high altitude crash, fire and seawater immersion.

The utmost security for everyone

Noah Data Strongroom uses the black-box technology in a new way, making daily use for businesses as well as private individuals possible. This backup system is available to store the significant data completely- and also protects them from fire, building collapse, floods or any other catastrophic disasters.

Tested under severest conditions

Vibrations and impact shocks up to 1,500 times the acceleration due to gravity cannot affect Noah Data Strongroom. The system withstands a water pressure of 600 bar, as well as 12-hour heat and fire loads; this leaves sufficient time for effective firefighting. It is compactly built with a weight of only 6.9 kg and is simple to operate. As a result, Noah Data Strongroom will fit on any desk and in any working environment.

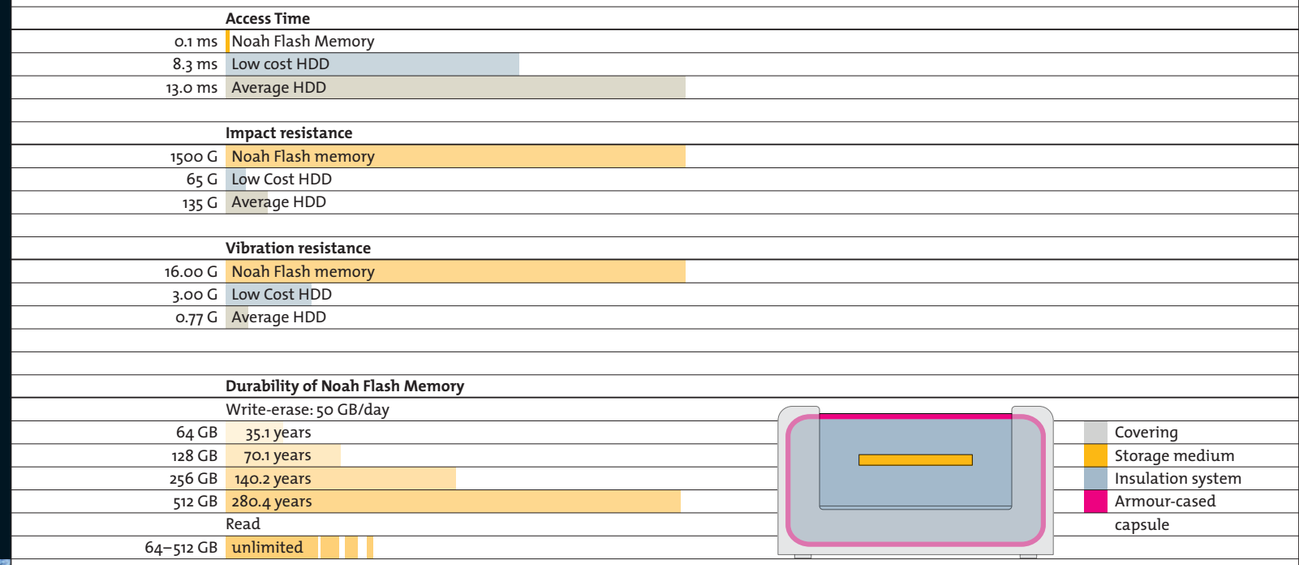
Sophisticated technology

Noah has been developed by Novega, a worldwide leading producer of data protective capsules. Since 2002, Novega is vesting the ocean shipping with security systems. To date, there are scarcely 2.000 vessels, equipped with Novega data protective capsules, on their way, mostly tankships, container vessels and bulk carriers, which constitute the biggest part of navigation. Also the names of such established cruise liners like AIDA, Queen Mary II or Costa Concordia are to be found in Novega’s customer portfolio.

Hard shell, solid core.

Noah combines the highest mechanical security with simple handling. And is even scalable.

Noah is tough.
The crash test provides the evidence: A mass of 250 kg with a point of impact of 100 mm cannot damage Noah. Noah, including the storage medium, survives a free fall from an altitude of 10 m with no problem.



Data security on site

Naturally, one can secure data in various ways, for example on a CD-ROM or DVD. These inexpensive, but time-consuming methods appear to be an emergency solution at best. Even the use as an archive is particularly problematic, as the discs have a limited shelf life. The tape drive, on the other hand, has a large capacity but is comparatively expensive, the handling is costly, and it is becoming a technological model which is phasing out. The external hard disc makes quick backups possible, but is inherently sensitive due to its mechanism.

Protection from external influences

As with all security media systems, the problem of storage arises: They are all, in their elementary form, unprotected against external influences. And who thinks about taking tapes or hard disks home after work or storing them somewhere else? Noah Data Strongroom, however, can remain on site, as it simultaneously protects the data mechanically. An optionally available fitting protects Noah from theft. When fixed to the floor or a wall, Noah is protected against burglars and vandals. Whoever uses Noah Data Strongroom as a safeguard, takes advantage of the state-of-the-art technology – inexpensive, long-lived and tough.

Rapid storage technology

Noah Data Strongroom is a modern, solid-state storage technique. This technique, known as flash memory by far surpasses the normal hard disc of today in efficiency, durability and reliability. The flash memory performs its work completely without moving parts. The Achilles' heel of the hard disk, the latently impending crash, is averted. Noah Data Strongroom operates without a ventilator and so is noiseless and energy saving. The production of Noah confirms to the "RoHS-Recommendation" (2002/95/EG) and contains neither problematic flame retardants nor cadmium nor mercury. All soldered connections are lead-free and the cables halogen-free.

Storage Expansions free of problems

Noah Data Strongroom excels by its long life-cycle and scalability. Due to the patent-registered principal, specialists can quickly replace or extend protected memory modules in the data capsule. The integrated memory can be externally read and serviced while the backup operation continues with substitute memory modules. After reassembly, the insulation element encloses the "memory heart" as previously and continues to provide a high level of protection against fire, impact shocks, extremely high and low temperatures and water.

Loss of data threatens everywhere.

Don’t leave your data security in its own hands. At home, too.

Noah likes it hot.
The flame test provides the evidence: Noah was exposed to fire of 1,1000 °C for a whole hour with a min. thermal flux of 158 kW/m². The furnace proves the extreme heat resistance. Noah survives ten hours in a temperature of 260°C and remains undamaged.

Costs						
Cost of purchase	▲▲	▲	▲[▲]	▲▲▲ [▲]	▲▲▲▲	▲
Running costs	▲	▲▲▲[▲]	▲▲	▲▲▲	▲▲	▲▲▲▲
Physical Data Safeguard						
Safeguard against water and fire water	▲▲▲▲	▲▲	▲	▲	▲▲	▲▲▲▲
Safeguard against fire and heat	▲▲▲▲	▲	▲	▲	▲▲▲	▲▲▲▲
Safeguard against collapse of a building	▲▲▲▲	▲	▲	▲	▲▲▲	▲▲▲▲
Safeguard against theft	▲▲[▲]	▲	▲	▲	▲▲▲	▼
Sensitivity storage medium	▲	▲▲▲	▲▲▲	▲▲▲	▲▲	▲
Data handling						
Level of automation	▲▲▲▲	▲	▲▲▲▲	▲ [▲ ▲]	▲▲▲▲	▲▲▲▲
Long-term compatibility (migration)	▲▲▲▲	▲▲	▲▲▲	▲	▲▲▲	▲▲▲▲
Error rate	▲	▲▲	▲	▲▲▲	▲	▼
Ease of remote storage	▲	▲▲▲▲	▲▲▲▲	▲▲▲▲	▲	▼
Hacking/Phishing/ Danger of theft	▲	▲▲ [▲]	▲▲ [▲]	▲▲ [▲]	▲▲	▲▲▲[▲]
Data availability						
Speed	▲▲▲	▲	▲▲▲	▲	▲▲▲	▲[▲]
Durability data recovery	▲	▲▲	▲▲	▲▲▲	▲	▲▲[▲]
Data Lifetime	▲▲▲[▲]	▲	▲▲	▲▲▲	▲▲▲	▲▲▲
Valuation	▲ low | ▲▲ medial | ▲▲▲ high | ▲▲▲▲ very high | ▼ not rateable					
	[▲] Per stage of extension, chosen option or application					

Loss mostly without warning

It doesn't always have to be the worst case. Even without fire, flood or blackout, there is the possibility of loss of data, because the system crashed or the hardware sustains a defect. Hard discs, the heart of memory of modern PCs and Servers, are recorded ever more densely with data, becoming more and more sensitive and susceptible to damage. In short: A data crash occurs without warning- and mostly, when it is especially inconvenient.

Permanent safeguard offered

A continuous, preferably permanent data safeguard in the background is thus essential, because it keeps the past for the present and the future. The data of a production company, design practice, a lawyer’s office, or a doctor’s practice consist of electromagnetic impulses, which must be preserved at all events. Not only in professional, but also in private contexts, data backup becomes more important than ever. After all, digitalization pervades nearly every sphere of life; music is distributed digitally, pictures and movies are produced digitally, documents are only preserved digitally. All these data, often with a high personal and emotional worth, are, in the event of a crash of the local data processor, in the greatest danger.

Security for everyone

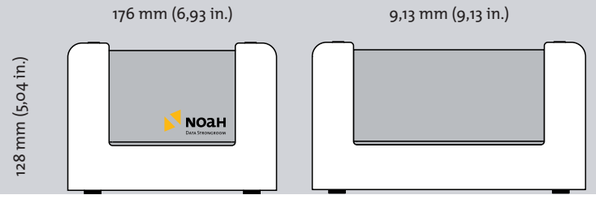
With Noah Data Strongroom, the backup finally becomes as simple and secure as it should be. This technology, well-established in airplanes and ships is now available for all users – the black box for the desk, so to speak, in which all data are practically indestructibly stored. No matter if business enterprise, service provider, manufacturer or private household- Noah Data Strongroom backs up your data rapidly and economically with access times of just 0.1 milliseconds.

Mobility and security

Because it is compact, extremely resistant and lightweight, the Noah Data Strongroom can also be used as a data collector in mobile applications (trains, busses, trucks or cablecars) or stationary equipment (production lines, energy systems, chemical or wind energy systems).

Noah sets standards.

You choose the most advanced technology and overall security.



Dimensions		**Flash memory**	
Size	W 176 x H 128 x D 232 mm	Capacity	up to 0.5TB(status 2009)
	(W 6,93 x H 5,04 x D 9,13 in.)		Actu
Weight	6.9 kg (15,2 lbs)		www.noah-strongroom.com
		NAND	Flash memory
Temperature ranges		Form factor	2.5”
Operation	0 to +55 °C (+32 to +131 °F)	Interface	SATA II
Storage	–30 to +70 °C (–22 to +158 °F)	Access time	0.1 ms
		– Read	up to 220 MB/sec
Physical protection		– Write	up to 200 MB/sec
Shock	1500 g	Power access	2.0 W
Vibration	to 16 g	Power Stand-by	0.35 W
Fire	1 h at 1.100 °C (2012 °F)		
Heat	10h at 260 °C (500 °F)	**Durability**	
Water pressure	24h at 600 bar (60 MPa)	Write/Delete	
Corrosion	seawater resistant	128 GB memory	70 years at 50 GB/day
		256 GB memory	140 years at 50 GB/day
Connections		512 GB memory	280 years at 50 GB/day
internal	SATA L Type (Data/current)	Read	limitless
external	Hi-Speed USB2.0 Mini-SATA I-Type	Data preservation	10 years
external, alt. 1	Hi-Speed USB2.0 Mini FireWire 400/800	MTBF	up to 2,000,000 hours
external, alt. 2	Ethernet Interface RJ-45	S.M.A.R.T	
Current	5V DC		
		Scope of delivery	data cable
Compatibility	available		DC current cable
	– eSATA Port		e-manual on CD-ROM
	– USB 2.0		alternatively pre-installed
	– FireWire 400/800		
		Warranty	5 years*
System requirements		RoHS	produced using a minimum of
PC	Windows 2000, XP, Vista, Windows 7		hazardous substances according
Apple	Mac OS10.x and higher		to EG directive 2002/95/EG
		Non-halogen	internal cabling non-halogen
		Made in Germany	
		*Flash memory: 2 years	

The Noah producer at one glance
1998 foundation of Novega Produktionssysteme GmbH
2002 Development and accreditation of the first maritime black box
2003 Development of a protective, combined data recorder for voice recording and aviation data
2004 Certification according to DIN EN 9001:2000, ISO certification
2006 Development of the second generation of maritime black boxes, BSH certification
2007 Development and accreditation of the Underwater Locating Device PT98 C-Proof, EU patent pending, BSH certification
2.000 vessels worldwide equipped with Novega black boxes
2009 Development and accreditation of the third generation of the maritime black box. BSH certification.
2009 Commercial launch of the data storage unit "Noah Data Strongroom". Registered trademark, patent pending.
Registered office: Sulzberg, Allgäu, Germany

Your contact:
Novega Produktionssysteme GmbH
Gewerbepark 2 | 87477 Sulzberg (See) | Germany
+49(0)8376-92990-0 | Fax +49(0)8376-92990-20
E-Mail info@noah-strongroom.com
www.noah-strongroom.com

Design and creation: buero-mader.de
Photography: rupp-fotografie.de; Fotolia (Eric Isselée, Andreas Edelmann, Zauberhut, Giòclick, Georg Preissl, Alexandre)

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