# Application: VOLVO
## HIGHTECH CRASH BARRIER

VOLVO for life SAFETY NEWS

signum
Bildtechnik GmbH
www.signumbt.com


Signum Bildtechnik GmbH in München hat für das neue VOLVO Testcenter, bestehend aus der Crashtestanlage, dem Beschleunigungsschlitten und den Komponententests die komplette Ausstattung für Highspeed-Videoaufnahmen geliefert. Zum Lieferumfang gehörten die Kameras, spezielle Kabel und Schleppkabel, Kamerahalterungen, Optiken, Installationen und Systemintegration vor Ort, Steuerungssysteme und MOTION NT/HG Imageserversoftware zur Bildaufbereitung und Analyse.
Lesen Sie Einzelheiten über die neue Testanlage, die am 29.3.2000 von Seiner Majestät, den König von Schweden eröffnet worden ist, in der folgenden Presseankündigung von VOLVO.

**VOLVO NEWS** 29 March, 2000

### HIGH-TECH CRASH BARRIER CREATES NEW POSSIBILITIES

*The new Volvo Cars Safety Centre has the world's most advanced crash barrier. With the help of new technology, the forces exerted on a car in conjunction with an offset impact are measured more effectively than ever before. This means that future Volvo cars will be able to provide their occupants with an even more effective safety cage.*

In recent years, car safety research has focused increasingly on offset impacts. Forty per cent of all severe impacts are frontal, and many of them come under the heading of offset. Offset means that the car collides with another car - or obstacle - with only a part of the front. The result is that only parts of the car's energy-absorbent structure are activated. The new barrier in the Volvo Cars Safety Centre will allow Volvo Cars to build cars that provide the best possible protection in offset impacts. This is made possible by fitting the barrier with piezo-electric sensors which measure 'round corners' - i.e. in two directions - both from the front and from the side. No other crash barrier on the market can do this. The sensors are arranged closer together than on most other barriers, moreover, and cover a broader measurement spectrum. This allows low-speed impacts in particular to be analysed in greater detail than ever before. "We well learn more about the forces involved now that we are able to measure them.
And the know-how that the new barrier will give us will also make it possible for us to build lighter cars without sacrificing safety," says Stefan Nilsson, director, Volvo Cars Safety Centre. Other important properties are simplicity and versatility, which mean that a far higher number of crash tests can be performed on a complete car - up to ten per week compared with three today. With the help of the new barrier, Volvo Cars can also conduct crash tests against objects in the real traffic environment, such as lamp-posts of various types, roadside barriers, truck platforms and the like. The new crash barrier is unique in yet another respect: its size. The block itself weighs 850 tonnes, is 4 metres in height and has a concrete core reinforced with iron ore for greater density. This core is surrounded by a 30 cm layer of extra-hard High Performance Concrete. Finally, the outer impact surfaces consist of 30 cm steel plate. The weight is essential in order for the block to withstand impacts even with heavy commercial vehicles at high speeds. Despite its tremendous weight, however, it is easy to move the barrier around inside the crash laboratory. Twelve air cushions beneath the block are filled with compressed air. With the help of two drive units, it is then very easy to move around. This means, among other things, that the block can be placed at any angle in relation to the vehicle under test - yet another way of ensuring that the crash tests are as close to reality as possible.