



DENEL OVERBERG TEST RANGE

A WORLD CLASS MULTIPURPOSE TEST FACILITY



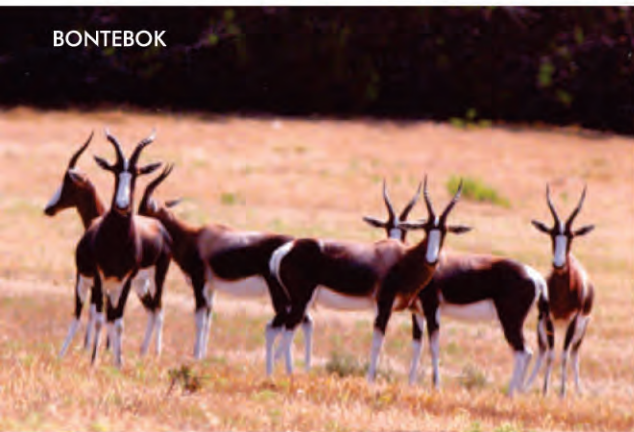


DENEL OVERBERG TEST RANGE

CONTROL ROOM



BONTEBOK



"DIE HERBERG" HOTEL



PROTEA FLOWERS



OUR VALUES:

PERFORMANCE

We embrace operational excellence

INTEGRITY

We are honest, truthful and ethical

INNOVATION

We create sustainable innovative solutions

CARING

We care for our people, customers, communities, nations and the environment

ACCOUNTABILITY

We take responsibility for our actions

COMPANY GROUP STRUCTURE

Denel Aviation
Denel Dynamics
Denel Integrated System Solutions
Denel Land Systems
Denel Overberg Test Range
Denel PMP
Denel SAAB Aerostructures SOC Ltd

Denel Mechem SOC Ltd
Denel Technical Academy
Denel Industrial Properties

Carl Zeiss Optronics (Pty) Ltd
Rheinmetal Denel Munitions (Pty) Ltd
Turbomeca Africa (Pty)Ltd

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FLIGHT TESTING



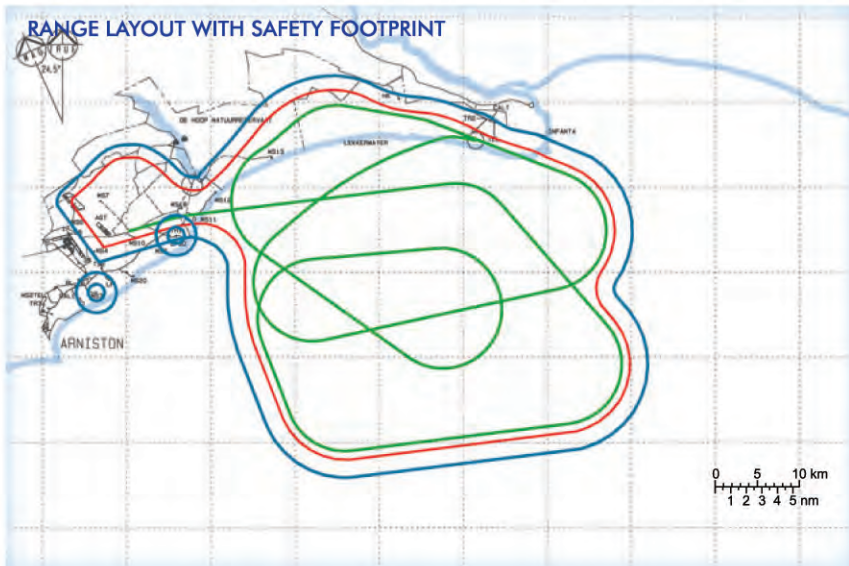
AIR-TO-AIR MISSILE TESTING



AIR-TO-GROUND MISSILE TESTING



RANGE LAYOUT WITH SAFETY FOOTPRINT



CAPABILITIES OF DENEL OVERBERG TEST RANGE

- Three instrumentation radars provide the primary real-time tracking capability.
- Six mobile cinetheodolites and one optical tracking pedestal with high-speed video and infrared data recording provide trajectory data and ensure optical coverage.
- A series of video, high-speed video and infrared cameras are available for launch, in-flight and impact event recording.
- Four telemetry stations, of which two can be deployed anywhere in the world, are available for high bit-rate telemetry data recording.
- A complete meteorology service provides surface and upper-air atmospheric profiles.
- A well-equipped central control centre provides the command and control infrastructure required for advanced test execution.
- A central computer cluster comprising a calculation and communications computer, as well as a graphic display system, including status display functionalities.
- A safety system for both in-flight and test volume safety includes a command destruct capability.
- A complete Data Reduction facility adds to the excellent support available to range users.
- All range measurements and data recordings are synchronised (IRIG-B) with time accuracy better than 10 microseconds.
- An extensive network consisting of fibre optics and microwave links provides the real-time communications between the control room, the central computer cluster and all participating instrumentation. Radio communication links are available from the control room to all Denel Overberg Test Range sites, as well as to participating aircraft and ships.
- Full logistic support services and supplementary facilities such as integration areas, target areas, explosives storage, workshops and offices, to name a few, are available at the Test Range.
- The Test Range can provide a wide spectrum of targets, ranging from high-speed drones to static targets and specially-built structures.
- The hotel complex, Die Herberg, offers accommodation and catering services, fully-equipped conference venues and training rooms as well as a variety of recreation facilities.

FACTORS THAT DIFFERENTIATE DENEL OVERBERG TEST RANGE:

- Large unrestricted test arena with appropriate topography
- Adjacent air force base with ground support facilities
- Instrumented test facility with multipurpose application
- Knowledgeable, experienced and service orientated workforce
- One-stop service:
 - Logistic support
 - Target services
 - Office and workshop space
 - Accommodation & catering services

DENEL OVERBERG TEST RANGE

Denel Overberg Test Range is a well-established, fully-integrated, multipurpose test facility, with its core business the in-flight testing of advanced guided and aviation systems for the local and international aerospace industries.

The experience gained from hundreds of tests since its establishment in the mid-eighties, has confirmed the ability of Denel Overberg Test Range to manage and execute any combination of air, ground and sea flight tests, rendering invaluable quality assurance services to defence forces and the armament industry in the development of advanced weapon systems, their commissioning into service and operational evaluation. In addition, the Test Range can provide mobile telemetry support in remote locations during space missions.

The focus of Denel Overberg Test Range is on the evaluation of flight performance, rather than the destructive power of weapons. The vast majority of firings are thus performed with inert warheads and/or telemetry packs. Its array of measuring systems, sophisticated support facilities, experienced personnel and unique location make Denel Overberg Test Range a well-equipped and effective test range by international standards.

THE MAIN SERVICES PROVIDED BY DENEL OVERBERG TEST RANGE INCLUDE:

- Flight tests on sophisticated missile and rocket systems, including standoff weapons.
- Aircraft performance, avionics evaluation, carriage and release clearance.
- Assistance in the qualification and certification of various military systems (new and upgraded).
- Measurement of trajectories of all types of bombs and artillery projectiles.
- Electronic warfare tests.

The Test Range provides an independent, impartial, confidential and cost-effective service to all its clients.

LOCATION

Situated on a 43 000 ha uninhabited site, with a 70 km coastline facing a virtually unrestricted sea area stretching into the South Indian Ocean, Denel Overberg Test Range provides a large test arena with few limitations. The facility is located near the southernmost tip of the African continent, 200 km east of Cape Town. A modern air base adjacent to the Test Range, provides runway and excellent ground support services for all types of aircraft.

The unique ecological location of the Test Range implies that quality service is delivered within the boundaries of good environmental management. This philosophy has undoubtedly contributed to the Test Range being awarded ISO14001: 2004 certification. Before every test campaign, all environmental risks are assessed to ensure no irreparable damage is done to the environment.

MOBILE CINETHEODOLITE



CONTROL ROOM



INSTRUMENTATION RADAR



RANGE LAYOUT

