

SPACIDO

Course correction system

SPACIDO (System with Accuracy Improved by Doppler Cinemometer) is a course correction system in range that operates by comparing the actual trajectory with the theoretical trajectory.



SPACIDO

Course correction system

Field artillery accuracy improvement is a matter of continuous effort. Greater accuracy provides better engagement of high pay-off targets, minimises collateral damage effects and the safety distance with respect to friendly troops, while reducing the ammunition consumption.

Less fired rounds allows a shorter time on the firing position, increased survivability, reduced logistics and lower costs.

SPACIDO, consisting of a muzzle-velocity measuring radar integrated into the gun and a NATO-standard fuze with 2-inch thread, can be used with all in-service or under development 105mm and 155mm ammunition.

SPACIDO generates an improvement of accuracy of a factor going up to 5 at long ranges.

■ SPECIFICATIONS

■ COURSE CORRECTION SYSTEM

- Muzzle-velocity measuring radar suited to any current or future gun
- On-board module built into the fuze: air brake + electronics
- NATO interoperability: standard 2-inch thread fuze
- Suitable for use on all NATO-standard in-service 105mm and 155mm 52 caliber ammunition
- GPS independant, no coded components to manage, easy to use
- Proven solution: low cost
- Improvement of accuracy of a factor going up to 5 at long ranges
- Development awarded by the DGA
- Team: Nexter Munitions and T2M

■ PRINCIPLE OF OPERATION

- Round fired according to an extended trajectory in relation to the target position
- Projectile speed measured during the beginning of the trajectory by the muzzle-velocity radar (Doppler cinemometer) fitted to the gun
- Comparison between real and predicted trajectory based on measures of velocity
- Fire correction computation in range
- Instant of deployment of the air brake transmitted to the fuze by the muzzle velocity radar
- Course correction through deployment of the air brake
- Operation of the fuze according to all standard modes (impact, delay mode, time, point detonation Superquick mode)

Accuracy improvement at 34km

| | Standard deviation | Range |
|-------------------|---------------------|-------|
| NATO error budget | σ ref | 500m |
| SPACIDO | $< 0.19 \sigma$ ref | 95m |