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TPT Plume Augmented Infrared Tow Target



The TPT plume target is an infrared augmented target which provides an all-aspect infrared signature for use in evaluation and training with weapons systems and trackers employing infrared guided missiles or infrared fuzed ordnance.

The TPT uses readily available jet fuel (JP-4, JP8, JET A, etc.) which, when burned, produces an infrared signature very similar to that produced by a jet aircraft engine exhaust.

Pilot light ignition is accomplished with a pyrotechnic ignitor which is activated by a computer linked to the towing aircraft via telemetry. The main plume ignition is controlled via the computer, and there is sufficient fuel for (4) 2-minute main runs and 20 minutes of loiter time.

The TPT is designed to be flown in either a one-way configuration from the Meggitt LTC series of launchers, or in a two-way (recoverable) configuration.

It can be flown from any commercial or military aircraft capable of carrying external stores. It can also be flown from sub-scale or full-size drone aircraft.

In the one-way configuration, pictured below, the TPT is fitted with an internally mounted tow reel. Reel out is controlled by the reel brake assembly which is designed to provide towline payout when the target is launched. The towline is released at the launcher when the mission is completed or the target is destroyed.

The weight of the target varies with configuration. The nominal weight of the two-way target without scoring is 40 kilograms.

The TPT is the target of choice for modern infrared missiles with frontal attack capability and for use with naval or other gun systems using IR fuzed ammunition. The TPT provides both infrared and radar augmentation. When fitted with the appropriate radar lens, it can be used as a multi-role radar and IR missile/gun target.

Key features

- Jet fuel is used to produce realistic jet engine exhaust simulation
- IR signature provided is all aspect, including forward hemisphere
- IR output: 200 watts/steradian in 4-5 micron band IR output also provided in 1.8-3 micron band with optional hot metal emitter
- Burner system operates to 20,000 feet MSL and to .9 mach
- Towbody made of fiberglass reinforced polyester resin for survivability
- Generous payload capacity allows flexible configuration
- Available in tow configurations for military and commercial aircraft, sub and full scale drone aircraft, and in both one-way and two-way (recoverable) versions
- Operatically proven, cost effective target used extensively by armed forces worldwide



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Specifications

Specification subject to change - TCO Review #XXX

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