

Aircraft Practice Bombs - 3 kg and 14 kg

Portsmouth Aviation manufacture
3 and 14 kg smoke and flash practice
bombs. Designed to match the forward
throw of operational weapons they
enable aircrew to follow operational
flight profiles during both night and
day training sorties.



The 3 kg Aircraft Practice Bomb

The 3 kg Practice Smoke and Flash Bomb is designed for use in practising those delivery techniques adopted for 1000 lb retarded bombs and 600 lb cluster bombs. The bomb is released from a No 122 ERU and produces white smoke and a flash on impact.

Safety during flight carriage and immediately after release will not be degraded should the bomb be fired initiated inadvertently as no significant debris, which may damage an aircraft, will be ejected.

The body comprises a cylindrical moulded tube with four external integrally moulded stabilising fins. The body also houses the smoke and flash unit.

The nose is a solid steel plug, the forward end being cupped internally to assist in the retardation of the bomb on impact. A frangible nose cap is attached to the cupped end of the nose. The rear face of the steel nose is machined to receive a fixed striker.

Ground safety is achieved by a steel pin fitted between the striker, and the smoke and flash unit. The pin is secured by a screw threaded into the steel nose. Prior to flight, the safety pin is removed and a three-legged spring, fitted to the striker, restrains movement of the smoke and flash unit.

The smoke and flash unit consists of a light alloy tube containing pyrotechnic composition, a primer tube containing gunpowder, and a percussion capped cartridge.

On impact the frangible nose cap shatters. The cupped steel nose retards downward movement of the bomb, and inertia, acting on the smoke and flash unit, overcomes the three-legged spring and drives a percussion cap onto the striker. The consequent flash fires the boost charge, which in turn ignites the primer charge, which ignites the main pyrotechnic filling.

Leading Particulars

Length	381 mm (15 in) approx
Diameter of bomb	76 mm (3 in) approx
Diameter across fins	153 mm (6.3 in) approx
Mass, filled	3.3 kg (7.2 lb) approx
Mass and type of main charge	300g (0.6 lb) SR 223E approx



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The 14 kg Aircraft Practice Bomb

The 14 kg No 2 Mk 1, 2 and 3 practice bombs are for use in practising those delivery techniques adopted for 1000 lb ballistic bombs. The Mk 1 and 2 produce white smoke and flash on impact and the Mk 3 is used when there is no requirement for smoke and flash. The Mk 1 and 2 differ only in the material used to manufacture the tail. The Mk 3 is an inert bomb with an aluminium tail. The bombs are released from a No 122 series ERU.

The body is machined to a profile and the nose is cupped internally to assist in the retardation of the bomb on impact and to shield the striker against impact if the bomb is accidentally dropped on to a hard surface. A frangible nose cap is fitted to the nose end of the body. The body is machined internally throughout its length to house a steel striker shaft in two guide bushes.

The bomb has a hollow, cast aluminium alloy tail unit with four fins. The forward end is drilled to house a safety pin and allow for inspection. It is machined internally to receive the cartridge container. A dimensionally and visually similar tail unit is fitted to the No 2 Mk 2 bomb; this unit being constructed of moulded plastic material.

On impact the frangible nose cap shatters. The cupped steel nose retards forward movement of the bomb and inertia, acting on the cartridge container compresses a three legged leaf spring and drives the cartridge container on to the striker, igniting the charge. On soft targets, i.e. mud and water, the striker shaft is forced backwards, compressing the leaf spring and so firing the percussion cap. The resulting flash and smoke escape from the open end of the tail unit.



Leading Particulars

Length	742 mm (29.2 in) approx
Diameter of bomb	76 mm (3 in) approx
Diameter across fins	160 mm (6.3 in) approx
Weight, filled	14.6 kg (32.2 lb) approx



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