

WASC 2030

WAI 512

Royal Ordnance
155mm Ammunition
System.

Royal Ordnance



155mm Ammunition System

ROYALORDNANCE
Defence systems, sub-systems and components



Introduction

For almost 300 years, Royal Ordnance (RO) has been supplying high-quality defence material to the British armed forces. Royal Ordnance products have a reputation for quality and reliability which is now combined with a new commercially aware competitiveness.

Royal Ordnance now has a capability to produce defence systems, sub-systems and components which are tailored to the requirements of many overseas customers.

Royal Ordnance is one of the world's major manufacturers of ammunition and is ready to respond to new challenges and requirements.

Royal Ordnance 155mm Ammunition System

Royal Ordnance has developed a new range of 155mm ammunition. This uses advanced technology to provide effective firepower for a wide range of gun systems.

Five component items give a defensive capability with the following features:

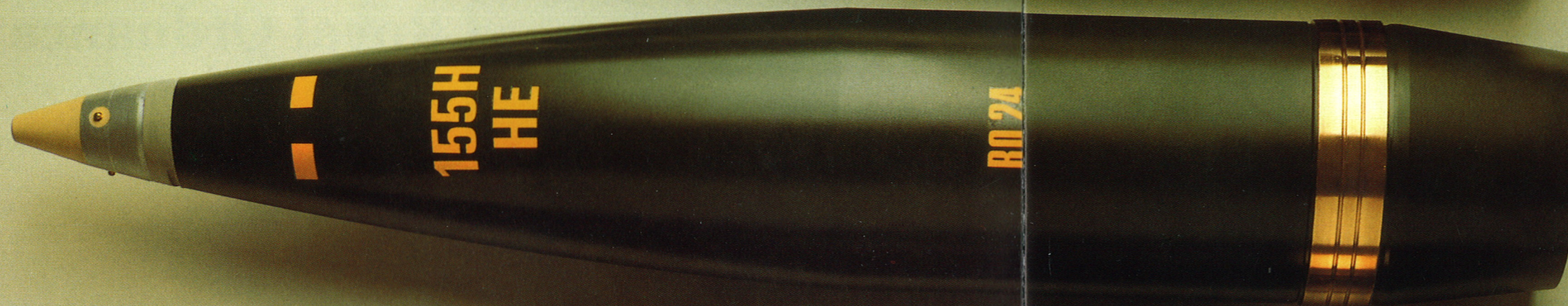
- OPERATIONAL FLEXIBILITY
- LOGISTIC SIMPLICITY
- ADVANCED TECHNOLOGY
- EASE OF PROCUREMENT

Royal Ordnance 155mm Ammunition System

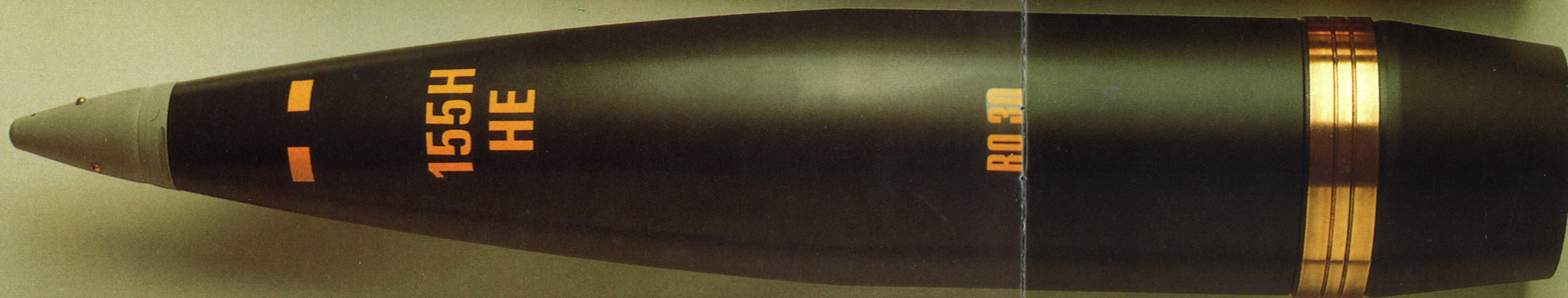
Royal Ordnance 155mm Ammunition System consists of five items covering HE requirements in all zones out to 30+km.



Projectile :RO 18
 Shell :Low cost
 Filling :TNT
 Fuzes :L106
 Charges :BIS 70 (Six increments)
 Range :3 to 18km



Projectile :RO 24
 Shell :High fragmentation
 :Low drag
 :Designed for hot and cold climates
 Filling :TNT or RDX/TNT
 Fuzes :Multi-Role Fuze or L106
 Charges :BIS 70 (Six increments) or BIS 100 top charge
 Range :3 to 24km



Projectile :RO 30
 Shell :High fragmentation
 :Low drag
 :Incorporates RO base-bleed system
 :Designed for hot and cold climates
 Filling :TNT or RDX/TNT
 Fuzes :Multi-Role Fuze or L106
 Charges :BIS 100 top charge
 Range :30+km


System Description – Charges

Charge :BIS 70
Design :RO stick propellant in RO combustible sleeve
Increments :Six, covering US zones 3 to 8
Propellant :Triple-based stick
Igniter :Base, incorporated with Increment 1
Temp. Range :−46°C to +63°C
Barrel Wear :Lower burning temperatures on charge exterior due to burning properties of combustible case.

Charge :BIS 100
Design :RO stick propellant in RO combustible charge container
Increments :One, covering US zone 8 super
Propellant :Triple-based stick
Igniter :Incorporated with combustible container
Temp. Range :−46°C to +63°C
Barrel Wear :Combustible container incorporates wear-reducing additives
:Charge includes anti-wear liner

Royal Ordnance 155mm Ammunition System

Designed by :Royal Ordnance
Developed by :Royal Ordnance
Produced by :Royal Ordnance
Quality :Royal Ordnance, to AQAP-1



BIS 70



BIS 100

Logistics

Royal Ordnance 155mm Ammunition System is compatible with most 39 calibre 155mm gun systems, including the M109A series:

M109A Series:USA

M198 :USA

M114/39 :USA/Netherlands

FH-77B :Sweden

FH-70/SP-70:UK, West Germany, Italy

GBT-155 :UK

M139 :Netherlands

M71 :Israel

AS-90 Mallet :Brazil

With these weapons, system performance is as below:



Projectile	Charge	US Zone	Max MV.	Max Range (at 21°C)
RO18	BIS 70	3 - 8	684 m/s	18.1km
RO 24	BIS 70	3 - 8	684 m/s	19.8km
RO 24	BIS 100	8 Super	827 m/s	24.7km
RO 30	BIS 100	8 Super	827 m/s	30+km

The following design features ensure logistic simplicity:

- Five items cover HE requirements to 30+km
- Palletised load for charges and projectiles (From factory or depot to gun position)
- Re-usable packaging
- One reputable manufacturer
- One manufacturer warranty
- Ease of technology transfer

Technology

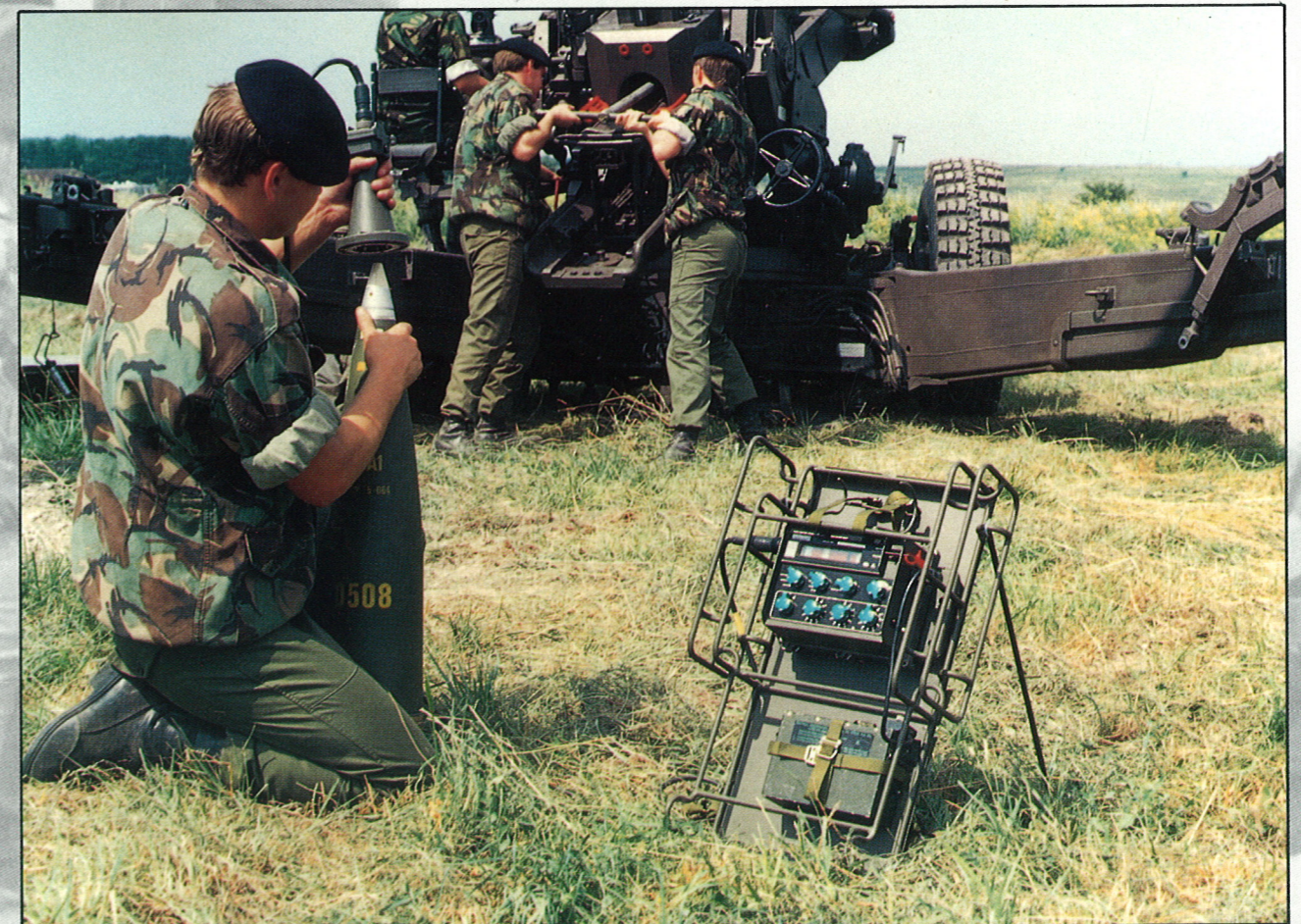
Royal Ordnance 155mm Ammunition System uses the latest technology to achieve high performance in a user-friendly, cost-effective manner.

The System has been designed to offer the following advantages:

- Projectiles and charges designed to optimise: range; accuracy; lethality and barrel life
- Projectiles and charges incorporating advanced technology
- Technology transfer available
- Access to the results of further development programmes
- Choice of HE filling
- Choice of fuze
- Multi-Role Fuze available
- All design and development carried out by RO
- All design rights owned exclusively by RO
- A carrier shell is under development
- Smoke and Illuminating projectiles can be supplied by sub-contract
- RO is one of the few suppliers with in-house facilities for design, development and production of charges, projectiles and fuzes.



Fuze-setter for Multi-Role and Electronic Timed Fuzes.



Setting fuzes at the gun position.

Procurement

The following features ensure ease of procurement and allow a package to be tailored to individual customer requirements.

- All items procured from one source
- Long-term rolling contract available
- Project manager appointed for each rolling contract
- Fixed prices for rolling contract
- Reduced inventory
- Lower cash investment
- Delivery arranged to customer depot
- Guaranteed delivery
- Overall cost-effective package
- Long-term RO association with London banking system make financial planning and facilities available

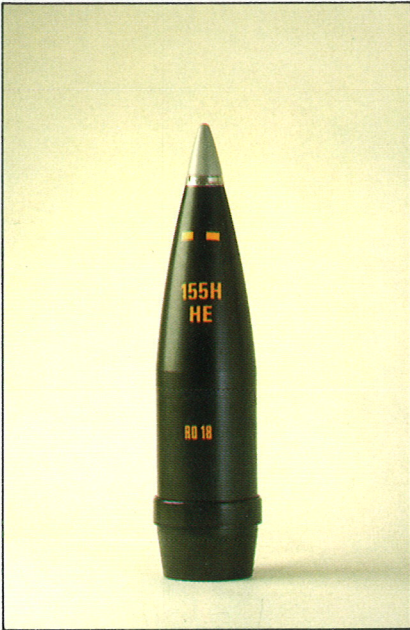


All system components are manufactured by Royal Ordnance.

Summary

Royal Ordnance 155mm Ammunition System is the complete solution to all 39 calibre 155mm HE ammunition requirements.

An integrated package, the system combines advanced technology with ease of use and operational flexibility. This system will give 155mm artillery a capability second to none, in the most cost-effective manner.



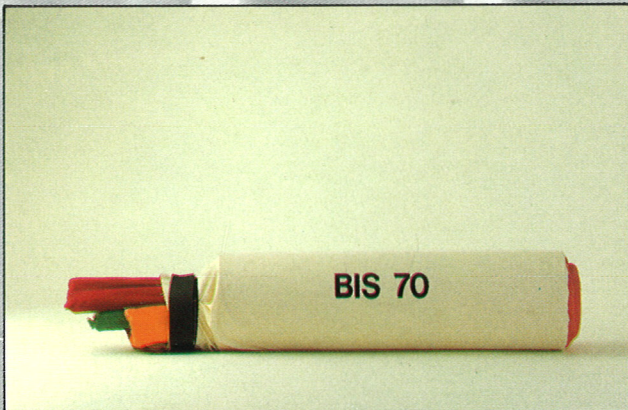
RO 18 Projectile with L106 fuze



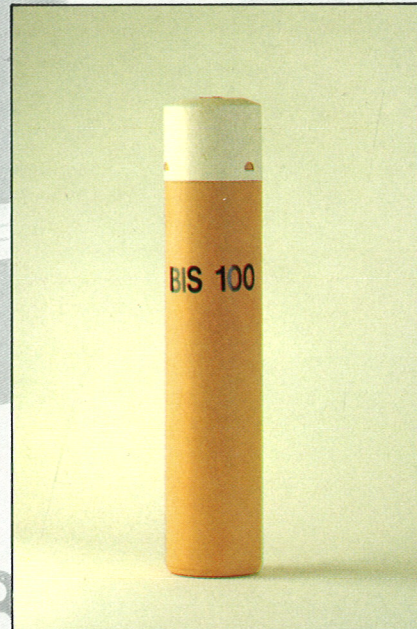
RO 24 Projectile with Multi-Role Fuze



RO 30 Projectile with Electronic Time Fuze



BIS 70 Charge



BIS 100 Charge

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