# **OTO Melara Mod 56**

The **OTO-Melara Mod 56** is an Italian-made 105 mm pack howitzer built and developed by OTO-Melara. It fires the standard US type M1 ammunition.

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## History

The OTO Melara 105 mm Mod 56 began life in the 1950s to meet the requirement for a modern light-weight howitzer that could be used by the <u>Italian Army</u>'s <u>Alpini</u> brigades mountain artillery regiments. That it remained in service with those same units a full half century after the howitzer's introduction is a testament to the gun's quality. The Mod 56 has a number of unique characteristics for a weapon of its caliber, including the ability for its crew to manhandle the gun (due to its light weight), and the capability of being able to be used in the direct fire role. Being a pack howitzer, it is designed to be broken down into 12 parts, each of which can be easily transported. [3]

The capability of this weapon to be "knocked-down" allows the sections to be transported a number of ways although the original design was for mule-pack using special pack saddles. More often it is towed by a light vehicle such as a jeep or Land Rover, and with the shield removed it can be carried inside an M113 APC. However, its particular attraction to Western armies in the 1960s was that its light weight meant it could be lifted in one piece by helicopter, which made the gun popular with light artillery units in many countries as well as the more specialized mountain and airborne troops. Overall, the Mod 56 has served in more than 30 countries worldwide, of which a partial listing of the major operators is listed below.

#### **OTO Melara Model 56/14 pack howitzer**



Italian mountain artillery troops with a Mod 56 in the Dolomites

the Dolomites		
Туре	Pack howitzer	
Place of origin	Italy	
Service history		
Used by	See Operators	
Production history		
Designer	OTO-Melara	
Specifications		
Mass	1,290 kg (2,840 lb)	
Length	3.65 m (12 ft 0 in)	
Barrel length	1.47 m (4 ft 9.9 in) L/14	
Width	1.5 m (4 ft 11.1 in)	
Height	1.9 m (6 ft 2.8 in) <sup>[1]</sup>	
Crew	7	
Shell	Semi-fixed 105 x 372mm R	
Shell weight	14.9 kg (33 lb) <sup>[2]</sup>	
Calibre	105 mm (4.13 in)	
Breech	Vertical sliding-block	
Recoil	Hydro-pneumatic	
Carriage	Split trail	
Elevation	-7° to +65°	
Traverse	56° <sup>[1]</sup>	
Elevation	-7° to +65°	

As an added refinement to the gun's mass, the Mod 56 is built to be an artillery piece with a reputation of ease with which it can be assembled and then disassembled into twelve components within minutes. The gun's light weight did have a drawback, however: it lacked the robustness necessary for sustained operations,

Rate of fire	10 rounds/min
Muzzle velocity	416.0 m/s (1,360 ft/s)
Maximum firing range	10,000 m (10,900 yd) <sup>[1]</sup>

Australian and New Zealand gunners in Vietnam found the weapon unsuitable for continuous operations. The guns in Vietnam were replaced by the sturdy US-made  $\underline{\text{M101A1}}$  after some two years. This lack of durability also led to their being carried on trucks for longer distances outside the combat zone. The Mod 56 offered limited protection to its crew.

The Chinese manufacturer NORINCO offers a version of the Model 56 pack howitzer and its associated ammunition.<sup>[4]</sup>

In Commonwealth service, the gun was known simply as the "L5 pack howitzer" with L10 ordnance. However, its lack of range and the indifferent lethality of its ammunition led the UK to start development of its replacement, the  $\underline{\text{L118 light gun}}$ , only two years after the pack howitzer entering service.

The gun also became the standard equipment of the Allied Command Europe Mobile Force (AMF <u>ACE Mobile Force (Land)</u> artillery, equipping the batteries provided by Canada, Belgium, Germany, Italy and the UK (until 1975).

#### **Combat service**

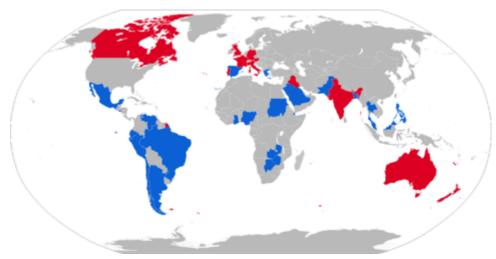
Identified combat use includes:

- Argentine Army 3rd and 4th artillery groups during the 1982 Falklands War.<sup>[5]</sup>
- British Army during the Aden Emergency in South Yemen (1 RHA and 19 light regiments) and Borneo (4, 6, 29 Cdo, 40, 45 and 95 Cdo light regiments)
- Australian Army during the Malayan Emergency in Borneo and Malaya (102 Field Battery) and during the Vietnam War in 1965–67 (and very limited use thereafter) by (101, 103, 105, 106 and 108 field batteries).
- Malaysian Army in Borneo and Malaysian Peninsular during the Second Malayan Emergency (1968–1989)
- Nigerian Army during Nigerian Civil War. Some were captured by Biafrans.
- New Zealand Army deployed rotations of 4 guns during the Vietnam War (161 Battery of the 16th Field Regiment). [6]

## **Operators**

#### **Current operators**

- Argentina 84 units in service since 1970/1972;<sup>[7]</sup> 76 in service in 2016,<sup>[8]</sup> 24 other in service since 2014/2015 (ex-Italian qun)<sup>[9]</sup>
- Bangladesh 114
  in 2016<sup>[10]</sup>
- Botswana 4 in
  2002<sup>[7]</sup>
- Srazil 100 in 2002<sup>[7]</sup>
- Chile 36 in 2002<sup>[7]</sup>



Operators of the Mod 56 (current in blue – former in red)

- Djibouti
- Ecuador 24 in 2002<sup>[7]</sup>
- Ghana
- Greece<sup>[11]</sup> 18 in 2002<sup>[7]</sup>
- Kenya 8 in 2002<sup>[7]</sup>
- Malaysia 75 in 2002<sup>[7]</sup>
- Nepal (Nepalese Army) 14 in 2002<sup>[7]</sup>
- Nigeria<sup>[12]</sup> 200 in 2002<sup>[7]</sup>
  - Biafran armed forces: captured from Nigeria<sup>[13]</sup>
  - Boko Haram: At least 1 captured from Nigeria<sup>[14]</sup>
- Pakistan: 50 ordered from Italy in 1975 and delivered between 1975 and 1978<sup>[15]</sup>. Still in service in 2002<sup>[7]</sup>
- Peru 20 in 2002<sup>[7]</sup>
- Philippines<sup>[7]</sup> 250 ordered
- Saudi Arabia
- Spain<sup>[11]</sup> 170 in the Army and 12 in the Marines in  $2002^{[7]}$
- **Sudan**<sup>[7]</sup>
- Thailand
- Venezuela 40 in 2002<sup>[7]</sup>
- Zambia 18 in 2002<sup>[7]</sup>
- Zimbabwe

#### Former operators

- Australia
- Austria
- **I** Canada: *L5 gun*<sup>[11]</sup>
- France: *HM-2*<sup>[11]</sup>
- Germany<sup>[11]</sup> 19 in 2002<sup>[7]</sup>
- India 50 in 2002<sup>[7]</sup>
- Iraq<sup>[16]</sup>
- Italy:<sup>[11]</sup> 267 guns in 2002<sup>[7]</sup>
- New Zealand 20 used between 1963 and the 1980s<sup>[6]</sup>
- Portugal 24 in 2002<sup>[7]</sup>
- Somalia 90 in 2002<sup>[7]</sup>
- WilliamWillia

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#### **Notes**

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### **External links**

- OTO Melara 105 mm Pack Howitzer on ProbertEncyclopaedia.com (http://www.probertencyclopaedia.com/cgi-bi n/res.pl?keyword=OTO+Melara+105+mm+Pack+Howitzer&offset=0)
- German page on the OTO Melara 105 mm Pack Howitzer (https://web.archive.org/web/20061130134142/http://www.panzerbaer.de/guns/bw\_fh\_105mm\_f.htm)

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