



## 7.62 X 51 MM

BALL FMJ M80 - 9,4 G (145 GR)

### 7.62 x 51 mm - cartridge

The cartridge consists of case, primer, gunpowder and bullet. It is applicable in extreme polar or desert conditions, contributing to the versatility of its use.

### 7.62 x 51 mm FMJ - M80 bullet

The FMJ (Full Metal Jacket) bullet weighs 9.4 g (145 gr) and features a lead core to deliver reliable penetration and stability. The jacket is made of CuZn10, providing the bullet with strength and uniform ballistic characteristics.

### 7.62 x 51 mm - case

The caliber 7.62 x 51 mm CuZn30 case is intended for inserting the powder charge, primer and bullet.

# SPECIFICATIONS

## Technical Specification

### CARTRIDGE

Caliber	7.62 x 51 mm, NATO
Weight	max 25.4 g
Length	max 71.12 mm

### BULLET GRAIN

Type	FMJ, Ball
Weight	9.52 g ± 0.1 g (147 grain)
Length	max 28.95 mm
Material	Jacket - CuZn10; Core - Lead
Extraction	≥ 265 N

### CASE

Length	max 51.18 mm
Material	CuZn30

### PRIMER

Type	Boxer, non-corrosive, non-toxic
Propellant	Smokeless Powder (Double Base)
Waterproof	Sealant applied

The 7.62x51mm, NATO, Ball, ammunition producing in ATS AMMO is in compliance with NATO STANAG 2310 requirements. It's comply the requirements to the NATO manuals AC/225(LG/3-SG/1)D/9 and PFP (NAAG-LCG/1-SG/1)WP(2010)0002. The ammunition can be fired from NATO 7.62 mm weapons: Machine gun - L7A2 and M240B as well as assault rifles -G3A2, M14.

ELECTRONIC PRESSURE AND VELOCITY (KIAG 6215)			
<b>Ammunition Temperature</b>	<b>+21°C ± 2°C</b>	<b>+52°C &amp; -54°C</b>	
<b>Velocity (at 24 m, m/s)</b>	$V = 825 \pm 15 \text{ m/s}$	Max Velocity Difference between +52°C/ -54°C and 21°C samples + 45 m/s and - 75 m/s	
<b>Standard Deviation</b>	$\leq 9.7 \text{ m/s}$	No requirement	
<b>Max Corrected Mean Case Mouth Pressure, MPa</b>	$XCP +3SD \leq 445 \text{ Mpa}$	Max case mouth difference between +52°C/ -54°C and 21°C samples is not + 55 Mpa or -110 Mpa  $XCP \leq 460 \text{ Mpa}$	
<b>Min Corrected Mean Port Pressure, MPa</b>	$XPP -3SD \geq 56 \text{ Mpa}$	No requirement	
<b>Action Time (ms)</b>	Max individual $\leq 4 \text{ ms}$	No requirement	
<b>Muzzle Energy (at 24 m, J)</b>	$\leq 2765 \text{ J}$	No requirement	
<b>Precision (at 550 m)</b>	$HSD \leq 200 \text{ mm}$ and $VSD \leq 200 \text{ mm}$		
<b>Function and Casualty</b>	Permissible percentage of defects was not exceeded		
<b>Primer sensitivity critical hight method (run down)</b>	Test ball $111.7 \pm 0.57 \text{ g}$	H +5 SD $\leq 500$	H - 2 SD $\leq 75$
<b>Terminal effects at distance 570 m, perforation mild steel plate, aluminium witness screen (0.3 m behind steel plate)</b>	$\leq 90\%$	3,5 mm (SA1010 / 1020, hardness RB 55-70) 0,5 mm ANSI 2024 T3	
<b>Trajectory match</b>	Horizontal $\leq 175 \text{ mm @ 300 m}$ $\leq 385 \text{ mm @ 500 m}$	Vertical $\leq 125 \text{ mm @ 300 m}$ $\leq 275 \text{ mm @ 550 m}$	
<b>Waterproof test</b>	No more than 15% of the tested rounds have leaks		

Compatibility with: STANAG 2310, AC/225(LG/3-SG/1)D/9 and PFP(NAAG-LCG/1-SG/1)WP(2010)0002 and STANAG 2310

PACKING	
<b>Micro</b>	15 rounds fiberboard box
<b>Makro</b>	600 rounds, ADR 1.4 S, UN0012 certified fiberboard case
<b>Weight (600 rounds)</b>	Net: 14.60 kg Gross: 15.40 kg NEQ: 1.70 kg
<b>Hazard class</b>	1.4 S
<b>UN Classification</b>	CARTRIDGES, SMALL ARMS

Packaging options are available based on the buyer's request. Cartridges can be supplied in standard outer cartons or, for an additional cost, in metal M2A1 boxes. All shipments are palletized, with boxes and pallets marked according to the customer's specifications.

**V** = Corrected velocity  
**XCP** = Corrected mean chamber pressure  
**XPP** = Corrected mean Port pressure  
**HSD** = Horizontal standard deviation  
**VSD** = Vertical standard deviation

## Test Equipment

**The equipment that is used for testing the ballistic characteristics of the ammunition is from Prototypa and is as follows:**

- Universal Ballistic Breech (Receiver) UZ-2002
- Support reducing inserter UZ-2002
- Exchangeable parts sets for cal. 7,62x39 and 7,62x51 - for action time measuring:
  - Breech block head insulated marked 2 INM
  - Firing pin insulated marked 2 INA
  - Extractor marked 2
  - Firing pin spring
  - Extractor spring
  - Extractor cap
  - Rivet 3x8
  - Firing pin end
- Pressure Test Barrel cal. 7,62x51 for Receiver M2; Length = 562 mm, KISTLER 6215 pressure vent position M1=54 mm, M2=381 mm
- Velocity/Accuracy Test Barrel cal. 7,62x51 for Receiver M2; Length = 562 mm
- Velocity/Accuracy Test Barrel cal. 7,62x51 for Receiver M2; Length = 650 mm
- Head space gauge GO and NOGO cal. 7,62x51 mm.  
SAU-4QU Signal acquisition unit  
4 charge inputs for transducers / voltage inputs (programmable)  
Quartz High pressure Sensor KISTLER 6215A1
- LS06 Intelligent Light gates
  - Diode system, Base 1 m, software BMS - English
- BP-1 Bullet pull tester.  
Range of calibers from 4,5 to 12 mm  
Maximum load 2500 N


The equipment is controlled, maintain, and calibrated according to the specifications. We are always aiming for improving the testing facility with latest in line equipment's and assuring that the possibility of mistake is reduced to the minimum.

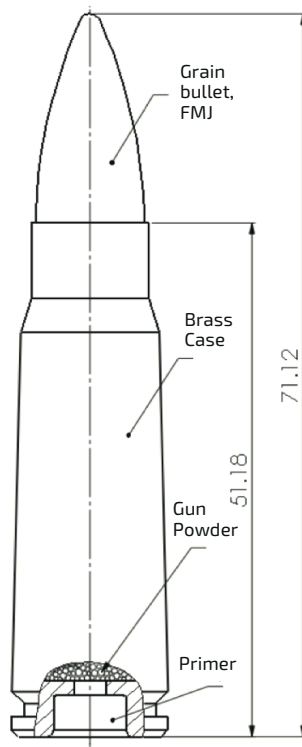
# Outsourcing Components

**ATS® Ammunition** has its own top-to-bottom manufacturing of a finished Product, an output of In-house made Machines, and produces 100% In-house Materials, Components and Tooling). ATS AMMO 7.62 x 51 mm components (bullet, case, primer) are perfectly compact, customizable and *available for individual purchase*.


<b>PRIMER</b>
<b>No mercury</b>
CuZn30

 <small>Case Length: max 51.18 mm</small>
<b>CASE</b> 7.62 x 51 mm
<b>Unprimed</b>
CuZn30

 <small>Grain Bullet Length: max 29 mm</small>
<b>M80 FMJ BALL</b>
<b>9.4 g    145 grain</b>
CuZn10                  Lead Core



**Image:** Components Layout (7.62 x 51 mm)  
Part number: 7621051