FIREARMS · CALIBRE REVIEW

The 9.3 mm Calibres

9.3×62, 9.3×64 Brenneke and 9.3×74R — history, published factory loads, muzzle energy and how they sit against Zimbabwe's Third Schedule.

SERIES **SAFARI NOTES**

FORMAT **PROFESSIONAL GUIDE STUDY NOTES**

PUBLISHED BY **THE SAFARI SHOW**

READ THIS FIRST

This is a study note for professional guides and hunters. Load figures are **manufacturers' published numbers** and vary with barrel length and lot. Legal requirements change: always confirm the **current** Parks and Wild Life Regulations with ZimParks before relying on any figure here.

> Three German cartridges share the 9.3 mm bore. One was built for the Mauser bolt action, one for high velocity, and one for double rifles. Together they make one of the most respected families in African hunting — and a regular topic in guide exams.

01 Metric and imperial

CARTRIDGE FAMILY	BULLET DIAMETER	IN INCHES
9.3 mm	9.30 mm	.366 in
.375 H&H Magnum	about 9.5 mm	.375 in

The .375 H&H fires a .375 in bullet, which is 9.5 mm — slightly larger than the 9.3 mm (.366 in) bore.

02 The three cartridges at a glance

CARTRIDGE	DESIGNED	CASE & RIFLE TYPE	CIP MAX. PRESSURE
9.3×74R	Germany, around 1900	Rimmed (the "R") — popular in double rifles and combination guns	340 MPa (49,313 psi)
9.3×62	Otto Bock, Berlin, 1905	Rimless, built to fit the Mauser 98 bolt action	390 MPa (56,565 psi)

CARTRIDGE	DESIGNED	CASE & RIFLE TYPE	CIP MAX. PRESSURE
9.3×64 Brenneke	Wilhelm Brenneke, 1927	Rimless, bolt action; ballistics similar to the .375 H&H	440 MPa (63,817 psi)

The 9.3×74R came first (c. 1900); the 9.3×62 followed in 1905 as a bolt-action round. The two are ballistically similar, but the rimmed round runs at lower pressure, which suits break-open guns.

WHY THE 9.3×62 CAUGHT ON IN AFRICA

Otto Bock designed it in 1905 as a big-game cartridge for the **Mauser 98** action, and as an all-round cartridge for German farmers in what is now Tanzania. Some colonial governments banned **military calibres**; the 9.3×62 had never been a military round, so it escaped those bans. It pre-dates the **.375 H&H (1912)** by seven years, and is credited with helping inspire it.

03 Published factory loads

9.3×62

LOAD	VELOCITY	ENERGY	KJ
230 gr Norma Ecostrike	2,641 ft/s (805 m/s)	3,563 ft·lbf	4.83
232 gr Norma Oryx	2,625 ft/s (800 m/s)	3,549 ft·lbf	4.81
275 gr Norma Solid	2,450 ft/s (747 m/s)	3,665 ft·lbf	4.97
285 gr Norma Oryx	2,362 ft/s (720 m/s)	3,531 ft·lbf	4.79
286 gr Swift A-Frame	2,362 ft/s (720 m/s)	3,543 ft·lbf	4.80

9.3×64 BRENNEKE

LOAD	VELOCITY	ENERGY	KJ
293 gr (19.0 g) RWS UNI Classic	765 m/s (about 2,510 ft/s)	4,101 ft·lbf	5.56
293 gr (19.0 g) Brenneke TUG	785 m/s (about 2,580 ft/s)	4,318 ft·lbf	5.85

9.3×74R

LOAD	VELOCITY	ENERGY	KJ
230 gr Norma Ecostrike	2,559 ft/s (780 m/s)	3,344 ft·lbf	4.53
247 gr (16.0 g) RWS KS	740 m/s (about 2,430 ft/s)	3,231 ft·lbf	4.38
285 gr Norma Oryx	2,329 ft/s (710 m/s)	3,433 ft·lbf	4.66

Velocities are the makers' published figures or, where a maker's own data could not be checked, as listed in reference compilations. Every energy figure was re-checked with the formula below. Makers revise their loads, so check the current box.

04 Working out muzzle energy

$$\text{Energy (ft·lbf)} = \text{bullet weight (gr)} \times \text{velocity}^2\ \text{(ft/s)} \div 450{,}400$$

Metric: energy (J) = ½ × mass (kg) × velocity² (m/s)

Where 450,400 comes from: 7,000 grains in a pound × 2 (from the ½ in ½mv²) × 32.174 ft/s² (gravity, to convert pounds to mass) = 450,436, rounded to 450,400. The 64.35 (2 × 32.174) that appears in some versions of the formula is *twice* gravity's acceleration, not a "gravitational constant".

Quick conversion: 1 kJ ≈ 737.6 ft·lbf, so multiply kilojoules by about 738 to get foot-pounds.

Worked example: 286 gr × 2,362² ÷ 450,400 = 3,543 ft·lbf ≈ 4.8 kJ.

05 Against Zimbabwe's Third Schedule

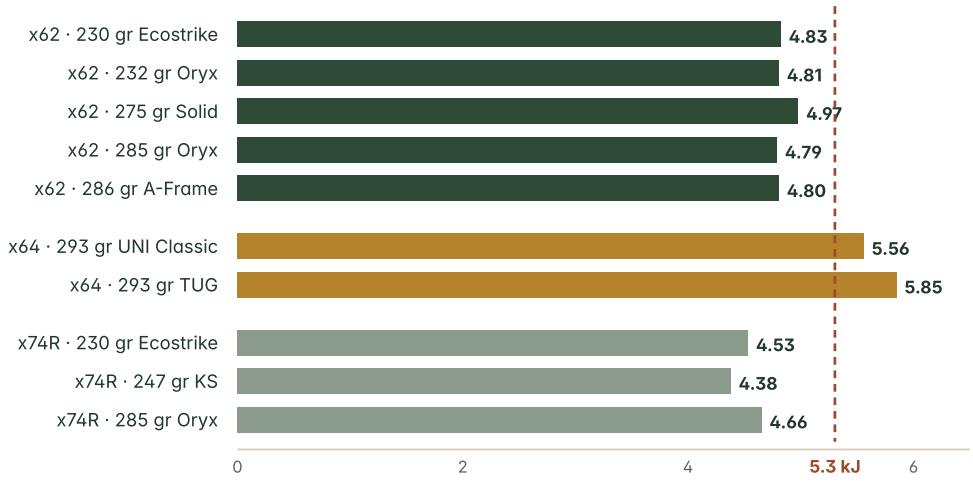
The Parks and Wild Life (General) Regulations, 1990 (**SI 362 of 1990**) list in their **Third Schedule** the animals that must be hunted with specified weapons, grouped in Parts. The weapon requirements usually quoted for each Part are:

PART	MINIMUM CALIBRE	MINIMUM MUZZLE ENERGY
A	9.3 mm (.366)	5.3 kJ (about 3,910 ft·lbf)
B	7 mm (.275)	4.3 kJ (about 3,170 ft·lbf)
C	7 mm (.275)	3 kJ (about 2,210 ft·lbf)
D	5.56 mm (.223)	850 J (about 630 ft·lbf)

CHECK BEFORE YOU RELY ON THIS

These figures could not be checked against the official text of the regulations for this edition, and they may be out of date: hunting writer Craig Boddington reports that Zimbabwe's energy minimum for the largest game was rewritten so that the 9.3×62 and 9.3×74R qualify, which a 5.3 kJ figure would not allow. The regulations have also been amended: **SI 114 of 2019** moved **buffalo** out of Part A into a new **Part E** (with its own bow-hunting rules). Confirm the current requirements with ZimParks.

PUBLISHED MUZZLE ENERGY VS. THE 5.3 kJ PART A FIGURE



Only the 9.3×64 Brenneke loads listed clear 5.3 kJ. The 9.3×62 and 9.3×74R loads fall roughly 0.3–0.9 kJ short of that figure.

How fast would a 9.3×62 bullet have to go? Rearranging the formula, a **286 gr** bullet needs about **2,480 ft/s (about 756 m/s)** to reach 5.3 kJ — well above the 2,362 ft/s of the published loads.

That gap is the whole debate. Hunters point out that the 9.3×62 has a long record of killing dangerous game cleanly, and many African countries that set a .375 minimum for dangerous game make an exception for it. If the Part A figure is 5.3 kJ, though, the published factory loads fall short of it on paper.

SAFETY

Never try to "make the numbers" by loading beyond a cartridge's published maximum pressure. Over-pressure loads can destroy a rifle and injure the shooter. Any handloading must follow published load data and be done by experienced people.

06 Bullets and makers

The most popular 9.3 mm bullet weights are **232, 250 and 286 grains**, with the occasional 300 gr. The study group noted 9.3 mm bullets or loads from **Woodleigh, Swift (A-Frame), RWS (including TIG and TUG), Sellier & Bellot, Barnes and Norma**. The 9.3×64 sits on a par with the .375 H&H ballistically.

07 From the discussion

THE GROUP'S VIEW

Use the heaviest calibre you can shoot accurately and competently. Good as the .375 is, most agreed that something in the .400 class is better suited to guides backing up on dangerous game.

08 What is a drilling?

The name comes from the German *drei*, three. A **drilling** is a **three-barrelled** gun — traditionally two shotgun barrels side by side over one rifle barrel. Later versions put two rifle barrels over a shotgun barrel. They are a German tradition, built for days of mixed hunting where a hunter might meet birds, deer or wild boar.

DRILLING

Three barrels

Usually two shotgun barrels over one rifle barrel.

BÜCHSFLINTE

Two barrels

One shotgun barrel and one rifle barrel side by side — e.g. a 16-bore paired with a 9.3×74R. Also called a Cape gun. Over-and-under versions are *Bockbüchsflinten*.

A two-barrel rifle-and-shotgun gun is a Büchsflinte (combination gun), not a drilling.

09 Key terms

CIP	The international commission that sets and tests cartridge pressure standards in its member states, most of them in Europe.
Rimmed / rimless	A rimmed case (the "R" in 9.3×74R) has a lip that headspaces it in break-open guns; rimless cases suit bolt-action magazines.
Muzzle energy	The bullet's kinetic energy as it leaves the barrel, in joules or foot-pounds.
Grain (gr)	Unit of bullet weight: 7,000 grains = 1 pound; 1 gram ≈ 15.4 grains.
Third Schedule	The part of Zimbabwe's Parks and Wild Life (General) Regulations listing animals that must be hunted with specified weapons.

In summary

- 9.3 mm = .366 in; the .375 H&H is a 9.5 mm calibre.
- **9.3×74R** (c. 1900, rimmed, doubles), **9.3×62** (Otto Bock, 1905, Mauser 98) and **9.3×64 Brenneke** (1927, .375-class).
- Energy (ft·lbf) = grains × fps² ÷ 450,400; kJ × ~738 = ft·lbf.
- Of the published loads listed, only the 9.3×64 clears 5.3 kJ; a 286 gr 9.3×62 would need about 2,480 ft/s.
- Confirm the current Third Schedule with ZimParks — it was amended in 2019.

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