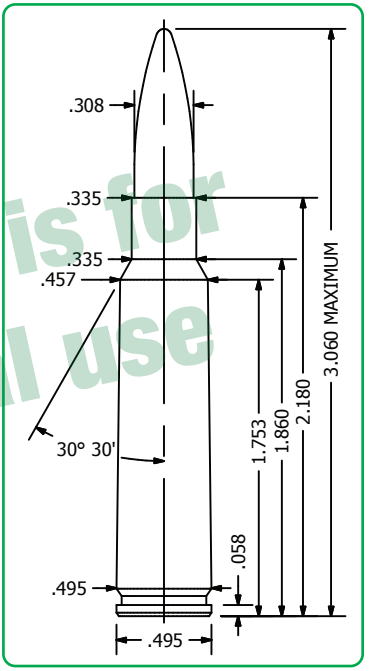
7.5 x 55mm Swiss

Test Specifications:

Firearm Used: M1911 Schmidt-Rubin
Barrel Length: 30.7”
Twist: 1 x 10.7”

Components:

Case: Norma
Trim-to Length: 2.170”
Primer: Winchester 8 1/2-120



Remarks:

In 1889, Switzerland adopted a new bolt-action service rifle designed by Col. Rudolf Schmidt, Director of the Federal Armory in Bern. The rifle was designed to use a novel straight-pull bolt that was fed through a 12-round detachable box magazine. Another Swiss Colonel, Eduard Rubin, designed the cartridge for Schmidt’s rifle. Rubin’s design was revolutionary because he used a lead core surrounded by a copper or steel jacket. Several design changes and upgrades were adopted during the service life of the Schmidt-Rubin rifle, but it served the Swiss well into the 1950s.

Originally, this cartridge used a 211 grain paper-patched lead bullet with a cupro-nickel clad steel jacket covering only the forward portion of the nose. This enabled it to achieve deeper penetration. This cartridge, referred to as the Model 90/03, produced about 1980 feet per second with a semi-smokeless powder. Both the rifle and ammunition were upgraded in 1911, reflecting the monumental changes in military ordnance. In the new loading, designated as the Model 1911 or M1911, the bullet was changed to a 174 grain spitzer boat tail with the velocity increased to 2640 feet per second. Dimensional changes were also made, and the newer ammunition should not be used in the older M1889 pattern rifles. This restriction is necessary because the groove diameter was increased from a nominal .304” to .308”. Our Model 1911 test rifle used the later .308” groove diameter, making these loads suitable for the Model 1896/11 and Model 1911 rifles, as well as the Model 1911 and Model 1931 carbines.

In developing the following data, we used five different Schmidt-Rubin rifles. Considerable difference in bore diameter caused wide variations in pressure. Therefore, we strongly urge the 7.5x55mm handloader to slug his rifle’s bore and use extreme caution in working up loads.

INDICATES MAXIMUM LOAD - USE CAUTION
LOADS LESS THAN MINIMUM CHARGES SHOWN ARE NOT RECOMMENDED.

7.5 x 55mm Swiss

	Bullet	Caliber	Weight	Type	C.O.A.L.
	#2100	.308”	110gr.	RN	2.650”
	#2105	.308”	110gr.	FMJ	2.650”
	#2110	.308”	110gr.	HP	2.750”

Powder v	Velocity >	2600	2700	2800	2900	3000
IMR-3031		38.7	40.2	41.7	43.2	44.7
IMR-4895			41.5	43.2	44.9	46.6
IMR-4064				44.4	46.1	47.8
IMR-4320				44.4	46.2	48.0
IMR-4350					53.3	55.0
Energy Ft. lbs		**1651**	**1780**	**1915**	**2054**	**2198**

Special Load	Powder	Grains	Velocity fps	Energy Ft. lb
Accuracy Load	IMR-4895	44.9	2900	2054
Hunting Load	IMR-4895	44.9	2900	2054

7.5 x 55mm Swiss

Bullet	Caliber	Weight	Type	C.O.A.L.
	#2120	.308”	125gr. SPT	2.800”

Powder ∨ Velocity >	2500	2600	2700	2800	2900
IMR-3031	36.0	38.0	40.0	42.0	44.0
IMR-4895		38.5	40.5	42.5	44.5
IMR-4064		40.0	41.6	43.3	45.0
IMR-4320			42.4	43.7	45.0
IMR-4350				52.2	53.7
IMR-4831				55.0	56.3
H4831				57.9	59.0
Energy Ft. lbs	**1734**	**1876**	**2023**	**2176**	**2334**

Special Load	Powder	Grains	Velocity fps	Energy Ft. lb
Accuracy Load	IMR-4064	43.3	2800	2176
Hunting Load	IMR-4064	43.3	2800	2176

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	Bullet	Caliber	Weight	Type	C.O.A.L.
	#2115	.308”	150gr.	FMJBT	2.950”
	#2130	.308”	150gr.	SPT	2.950”
	#2125	.308”	150gr.	SBT	2.950”
	#2190	.308”	150gr.	HPBT MatchKing	2.950”
	#2135	.308”	150gr.	RN	2.650”
	#2155	.308”	155gr.	HPBT Palma MatchKing	2.950”

Powder ∨ Velocity >	2400	2500	2600	2700	2800
IMR-3031	37.6	39.3	41.0	42.7	44.4
IMR-4895	38.5	40.5	42.5	44.5	46.5
IMR-4064	40.2	41.8	43.4	45.0	46.6
IMR-4320	40.4	42.2	44.0	45.8	47.6
IMR-4350		47.0	49.0	51.0	53.0
IMR-4831				53.0	55.1
H4831				56.0	58.0
Energy Ft. lbs	**1918**	**2081**	**2251**	**2428**	**2611**

Special Load	Powder	Grains	Velocity fps	Energy Ft. lb
Accuracy Load	IMR-4064	45.0	2700	2428
Hunting Load	IMR-4064	46.6	2800	2611

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	Bullet	Caliber	Weight	Type	C.O.A.L.
	#2145	.308”	165gr.	SBT	3.060”
	#2140	.308”	165gr.	HPBT	3.060”
	#2200	.308”	168gr.	HPBT MatchKing	3.060”

Powder ∨ Velocity >	2300	2400	2500	2600	2700
IMR-3031	35.8	37.6	39.4	41.2	43.0
IMR-4895	38.4	40.2	42.0	43.8	45.6
IMR-4064	38.2	40.1	42.0	43.9	45.8
IMR-4320		40.6	42.6	44.6	46.6
IMR-4350			46.8	48.9	51.0
IMR-4831				50.9	53.0
H4831				53.2	55.2
Energy Ft. lbs	**1938**	**2110**	**2289**	**2476**	**2670**

Special Load	Powder	Grains	Velocity fps	Energy Ft. lb
Accuracy Load	IMR-4064	43.9	2600	2476
Hunting Load	IMR-4064	45.8	2700	2670

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	Bullet	Caliber	Weight	Type	C.O.A.L.
	#2275	.308”	175gr.	HPBT MatchKing	3.060”
	#2150	.308”	180gr.	SPT	3.060”
	#2160	.308”	180gr.	SBT	3.060”
	#2220	.308”	180gr.	HPBT MatchKing	3.060”
	#2170	.308”	180gr.	RN	2.850”

Powder v Velocity >	2100	2200	2300	2400	2500
IMR-3031	32.5	34.5	36.5	38.5	
IMR-4895	34.0	36.1	38.2	40.3	
IMR-4064	34.2	36.3	38.4	40.5	42.6
IMR-4320		37.5	39.5	41.5	43.5
IMR-4350			44.0	45.8	47.6
IMR-4831				47.7	49.5
H4831				50.2	52.3
Energy Ft. lbs	**1713**	**1880**	**2055**	**2238**	**2428**

Special Load	Powder	Grains	Velocity fps	Energy Ft. lb
Accuracy Load	IMR-4350	45.8	2400	2238
Hunting Load	IMR-4350	47.6	2500	2428

7.5 x 55mm Swiss

	Bullet	Caliber	Weight	Type	C.O.A.L.
	#2165	.308”	200gr.	SBT	3.060”
	#2230	.308”	200gr.	HPBT MatchKing	3.060”

Powder ∨ Velocity >	2100	2200	2300	2400
IMR-3031	33.8	36.0	38.2	
IMR-4895	35.9	38.1	40.3	
IMR-4064	36.0	38.0	40.0	42.0
IMR-4320	36.5	38.5	40.5	42.5
IMR-4350		42.1	44.2	46.3
IMR-4831			46.0	48.2
H4831			49.0	51.2
Energy Ft. lbs	**1958**	**2149**	**2349**	**2558**

Special Load	Powder	Grains	Velocity fps	Energy Ft. lb
Accuracy Load	IMR-4350	44.2	2300	2349
Hunting Load	IMR-4350	46.3	2400	2558

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