

45-70 GOVERNMENT (TRAP DOOR)

RIFLE:	Springfield 1873	BULLET DIAMETER:	0.458"
BARREL:	29½", 1 in 23" Twist	MAXIMUM C.O.L.:	2.550"
CASE:	Winchester	MAX. CASE LENGTH:	2.105"
PRIMER:	Federal 210	CASE TRIM LENGTH:	2.095"

Renewed interest in older cartridges for contemporary use is a trend that cuts both ways. While it may encourage the development and use of new components and firearms for such cartridges, confusion about safety also can arise. This is especially true for a cartridge like the venerable 45-70 where old and new rifles both come into use. Remember that the 45-70 "Trap Door" is not the new rifle, but the old. It must be loaded for carefully.

The following data is to be used in such rifles as the 1873 Springfield "Trap Door" rifle, H&R "Shikari", 1886 Winchester, Rolling Block 45-70's and all other rifles of similar construction. The data represented here did not exceed 25,000 c.u.p. in our pressure barrel.

For the older rifles we have included our 300 grain Jacketed Hollow Point. This bullet is constructed to expand properly at the lower velocities. We recommend the use of slower burning powders to keep the case more nearly filled and pressures low. When using Pyrodex, its maker recommends that the case be full or slightly compressed for adequate ignition. For this reason only two increments are shown.

Also available is the 325 grain FTX® bullet. Introduced in 2009 the 325 grain FTX® bullet brought 45-70 performance to a new level. The FTX® bullet features a long streamlined ogive that requires cases to be trimmed shorter, to 2.040", than normally prescribed. This also reduces case capacity which effects charge weights. The data listed for the 325 grain FTX® bullet is specifically for that bullet. Do no deviate.

When loading FTX® and MonoFlex® bullets, case trim lengths and cartridge overall lengths will be specified by individual cartridge and bullet in the data chart.

250 GRAIN BULLETS

SECTIONAL DENSITY:
DIAMETER:0.170
0.458"

250 gr. MonoFlex®

B.C.: 0.175 C.O.L.: 2.587"
Item No. 45010

CASE TRIM LENGTH: 2.040"

The data below was developed with MonoFlex® bullets. Due to the longer ogive it is critical that cartridge cases be trimmed to the length specified.

VELOCITY (FPS – feet per second)					
POWDER	1400	1500	1600	1700	1800
IMR SR-4759	24.9 gr.	26.1 gr.	27.4 gr.	28.5 gr.	
Alliant RL-7	25.9 gr.	29.6 gr.	33.3 gr.	37.0 gr.	40.7 gr.
Accurate 5744	29.9 gr.	31.9 gr.	33.8 gr.		

Hornady ballistics tables are available at hornady.com/ballistics

300 GRAIN BULLETS

SECTIONAL DENSITY:
DIAMETER:0.204
0.458"

300 gr. HP

B.C.: 0.197 C.O.L.: 2.550"
Item No. 4500

VELOCITY (FPS – feet per second)							
POWDER	1300	1400	1500	1600	1700	1800	1900
IMR SR-4759	25.5 gr.	27.0 gr.	28.5 gr.	30.0 gr.	31.5 gr.	33.0 gr.	
VIHT N-120		26.9 gr.	29.3 gr.	31.7 gr.	34.0 gr.	36.4 gr.	
IMR 4227	27.2 gr.	28.5 gr.	29.8 gr.	31.1 gr.	32.4 gr.	33.7 gr.	
Accurate 5744		28.6 gr.	30.9 gr.	33.2 gr.	35.5 gr.	37.8 gr.	40.1 gr.
VIHT N-130		33.1 gr.	35.1 gr.	37.2 gr.	39.3 gr.	41.4 gr.	43.5 gr.
Alliant RL-7	31.6 gr.	33.9 gr.	36.3 gr.	38.6 gr.	41.0 gr.	43.3 gr.	45.7 gr.
H322			40.7 gr.	44.2 gr.	47.7 gr.	51.3 gr.	54.8 gr.
IMR 3031	40.9 gr.	43.1 gr.	45.3 gr.	47.6 gr.	49.8 gr.	52.0 gr.	
PYRODEX CTG.		52.1 gr.	56.4 gr.				

Hornady ballistics tables are available at hornady.com/ballistics

325 GRAIN BULLETS

SECTIONAL DENSITY:
DIAMETER:0.221
0.458"

325 gr. FTX®

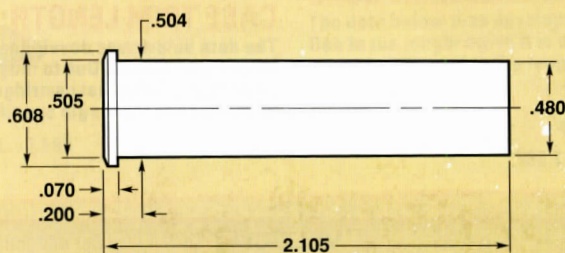
B.C.: 0.230 C.O.L.: 2.590"
Item No. 45015

CASE TRIM LENGTH: 2.040"

The data below was developed with FTX® bullets. Due to the longer ogive it is critical that cartridge cases be trimmed to the length specified.

VELOCITY (FPS – feet per second)						
POWDER	1350	1400	1450	1500	1550	1600
IMR SR-4759		25.7 gr.	26.6 gr.	27.5 gr.	28.4 gr.	29.3 gr.
Accurate 5744	31.2 gr.	32.2 gr.	33.2 gr.	34.2 gr.	35.3 gr.	

Hornady ballistics tables are available at hornady.com/ballistics



45-70 GOVERNMENT (1895 MARLIN)

RIFLE:	Marlin 1895	BULLET DIAMETER:	0.458"
BARREL:	22", 1 in 20" Twist	MAXIMUM C.O.L.:	2.550"
CASE:	Winchester	MAX. CASE LENGTH:	2.105"
PRIMER:	Federal 210	CASE TRIM LENGTH:	2.095"

We intend the following data only for use in the Marlin Model 1895. It should not be used in antique 45-70s or replicas of them. Pressures here are held to 40,000 c.u.p. maximum. This rifle is the same basic action as that of the 444 Marlin which operates at 40,000 c.u.p.

The 45-70 cartridge has enjoyed a renaissance in the past two decades. Although it never totally "went away" as an often used sporting cartridge, new rifles chambered for it have sparked a rebirth of interest. The Marlin 45-70 is one of these firearms. A reliable and functional big game rifle, the Marlin 45-70 has sufficient energy for any North American game if used at moderate range.

The 1895 is shown with the 250 grain MonoFlex®, 300 grain Hollow Point, 325 grain FTX® and 350 grain Round Nose, but not with the 500 grain Round Nose. The 500 grain Round Nose, when loaded to function through the magazine, has the bullet seated with the cannellure below the mouth of the case, which takes up too much case volume and allows no place for crimping. A good crimp is of utmost importance in a rifle with a tubular magazine and heavy recoil, such as the 45-70.

Excellent accuracy and good uniformity were obtained with our rifle using IMR 4198 and VIHT N-130. The 300 grain Hollow Point makes a good choice on deer while the 325 grain FTX® and 350 grain Round Nose are excellent choices for anything from black bear to moose.

When loading FTX® and MonoFlex® bullets, case trim lengths and cartridge overall lengths will be specified by individual cartridge and bullet in the data chart.

250 GRAIN BULLETS

SECTIONAL DENSITY:
DIAMETER:0.170
0.458"

250 gr. MonoFlex®

B.C.: 0.175 C.O.L.: 2.587"
Item No. 45010

CASE TRIM LENGTH: 2.040"

The data below was developed with MonoFlex® bullets. Due to the longer ogive it is critical that cartridge cases be trimmed to the length specified.

VELOCITY (FPS – feet per second)						
POWDER	1800	1900	2000	2100	2200	2300
IMR 4198	41.5 gr.	43.4 gr.	45.3 gr.	47.3 gr.	49.2 gr.	
H4198	42.5 gr.	44.4 gr.	46.4 gr.	48.3 gr.	50.3 gr.	52.2 gr.
NORMA 200	44.8 gr.	47.1 gr.	49.3 gr.	51.5 gr.	53.8 gr.	
VIHT N-130	45.3 gr.	47.3 gr.	49.4 gr.	51.4 gr.	53.4 gr.	
Alliant RL-7	45.6 gr.	47.7 gr.	49.8 gr.	51.8 gr.	53.9 gr.	
Accurate 2015	49.6 gr.	51.5 gr.	53.4 gr.			

Hornady ballistics tables are available at hornady.com/ballistics

300 GRAIN BULLETS

SECTIONAL DENSITY:
DIAMETER:0.204
0.458"

300 gr. HP

B.C.: 0.197 C.O.L.: 2.550"
Item No. 4500

VELOCITY (FPS – feet per second)						
POWDER	1600	1700	1800	1900	2000	2100
VIHT N-120	32.2 gr.	35.1 gr.	38.0 gr.	40.9 gr.	43.8 gr.	
IMR 4198	35.8 gr.	38.4 gr.	41.0 gr.	43.6 gr.	46.2 gr.	48.7 gr.
VIHT N-130	38.5 gr.	41.3 gr.	44.1 gr.	46.9 gr.	49.7 gr.	52.4 gr.
H4198	42.3 gr.	44.6 gr.	46.8 gr.	49.0 gr.	51.2 gr.	
Alliant RL-7	44.7 gr.	46.6 gr.	48.5 gr.	50.4 gr.	52.3 gr.	
IMR 3031	50.2 gr.	52.4 gr.	54.7 gr.	56.9 gr.		

Hornady ballistics tables are available at hornady.com/ballistics

325 GRAIN BULLETS

SECTIONAL DENSITY:
DIAMETER:

0.221
0.458"



325 gr. FTX®

B.C.: 0.230 C.O.L.: 2.590"
Item No. 45015

CASE TRIM LENGTH: 2.040"

The data below was developed with FTX® bullets. Due to the longer ogive it is critical that cartridge cases be trimmed to the length specified.

VELOCITY (FPS – feet per second)

POWDER	1800	1850	1900	1950	2000	2050	2100	2150
IMR 4198	40.5 gr.	41.6 gr.	42.6 gr.	43.7 gr.	44.8 gr.	45.8 gr.	46.9 gr.	47.9 gr.
VIHT N-120	41.7 gr.	42.7 gr.	43.8 gr.	44.9 gr.	45.9 gr.	47.0 gr.	48.1 gr.	49.1 gr.
H4198	42.0 gr.	43.0 gr.	44.0 gr.	45.0 gr.	45.9 gr.	46.9 gr.	47.9 gr.	
Accurate 1680	42.2 gr.	43.5 gr.	44.8 gr.	46.1 gr.	47.4 gr.	48.7 gr.	50.1 gr.	51.4 gr.
Alliant RL-7	43.2 gr.	44.4 gr.	45.6 gr.	46.8 gr.	48.0 gr.	49.1 gr.	50.3 gr.	51.5 gr.
Accurate 2230	47.8 gr.	49.1 gr.	50.4 gr.	51.7 gr.	53.0 gr.			

Hornady ballistics tables are available at hornady.com/ballistics

350 GRAIN BULLETS

SECTIONAL DENSITY:
DIAMETER:

0.238
0.458"



350 gr. InterLock® FP

B.C.: 0.195 C.O.L.: 2.545"
Item No. 4503



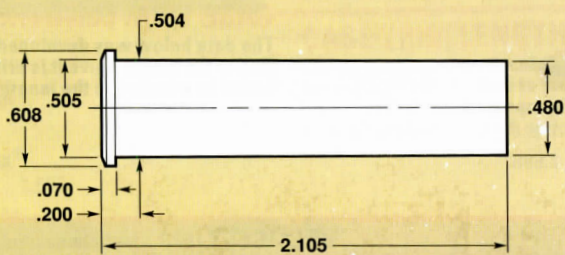
350 gr. InterLock® RN

B.C.: 0.189 C.O.L.: 2.550"
Item No. 4502

VELOCITY (FPS – feet per second)

POWDER	1400	1500	1600	1700	1800	1900
VIHT N-120	29.6 gr.	32.3 gr.	35.0 gr.	37.8 gr.	40.5 gr.	
IMR 4198	32.0 gr.	34.7 gr.	37.3 gr.	40.0 gr.	42.7 gr.	45.3 gr.
VIHT N-130	33.6 gr.	36.4 gr.	39.1 gr.	41.9 gr.	44.6 gr.	47.4 gr.
H4198	37.1 gr.	39.4 gr.	41.6 gr.	43.9 gr.	46.2 gr.	48.4 gr.
Alliant RL-7	38.3 gr.	40.6 gr.	42.9 gr.	45.2 gr.	47.5 gr.	49.8 gr.
IMR 3031	45.2 gr.	47.4 gr.	49.6 gr.	51.7 gr.	53.9 gr.	56.1 gr.
IMR 4064	48.2 gr.	50.5 gr.	52.9 gr.	55.2 gr.	57.6 gr.	
H4895	50.2 gr.	52.2 gr.	54.2 gr.	56.2 gr.	58.3 gr.	

Hornady ballistics tables are available at hornady.com/ballistics



45-70 GOVERNMENT (RUGER #1)

RIFLE:	Ruger #1	BULLET DIAMETER:	0.458"
BARREL:	22", 1 in 20" Twist	MAXIMUM C.O.L.:	2.925"
CASE:	Winchester	MAX. CASE LENGTH:	2.105"
PRIMER:	Federal 210	CASE TRIM LENGTH:	2.095"

WARNING: The following data is to be used in such actions as the Ruger #1, Browning 78, Wickliffe, and 45-70's chambered in the Siamese Mauser bolt action. This data has maximum charges that develop 50,000 c.u.p. as tested in the Hornady Lab. Under no circumstances should these loads be used in any weaker action in the 40,000 c.u.p. class or less. Keep rounds developed with the following data clearly marked if there is even a remote chance they could be misappropriated to the wrong gun.

The 45-70 has been a popular sporting round since 1873, and with the advent of strong actions like the Ruger #1, its popularity has increased along with the usefulness of the cartridge. It is not possible for the ammunition manufacturers to produce rounds which utilize the full potential of these strong actions due to numerous antiques and antique replicas that remain in circulation. However, the handloader can produce every foot pound possible by using the correct powder-bullet combinations in his rifle, as listed here in the Hornady Handbook.

With the Hornady 500 grain DGX® or DGS® and IMR 3031, the Ruger #1 can produce velocities only 400 fps slower than the 458 Winchester. With such ballistic performance, the 45-70 Ruger can certainly take the largest game North America has to offer. Should any reloader desire to use the 250 grain MonoFlex®, 300 grain Hollow Point, or the 325 grain FTX® data for the Marlin 1895 45-70 may be used.

350 GRAIN BULLETS

SECTIONAL DENSITY:
DIAMETER:

0.238
0.458"



350 gr. InterLock® FP

B.C.: 0.195 C.O.L.: 2.545"
Item No. 4503



350 gr. InterLock® RN

B.C.: 0.189 C.O.L.: 2.550"
Item No. 4502

VELOCITY (FPS – feet per second)

POWDER	1700	1800	1900	2000	2100	2200
IMR 4198	42.2 gr.	44.4 gr.	46.6 gr.	48.9 gr.	51.1 gr.	53.3 gr.
VIHT N-130	41.0 gr.	44.1 gr.	47.1 gr.	50.2 gr.	53.3 gr.	56.3 gr.
Alliant RL-7	44.8 gr.	47.5 gr.	50.2 gr.	52.8 gr.	55.5 gr.	
IMR 3031	49.0 gr.	51.2 gr.	53.3 gr.	55.4 gr.	57.5 gr.	59.6 gr.
Accurate 2015	50.9 gr.	53.7 gr.	56.5 gr.	59.4 gr.		
IMR 4895	51.2 gr.	54.2 gr.	57.2 gr.	60.1 gr.		
H322	52.9 gr.	55.4 gr.	57.9 gr.	60.4 gr.		

Hornady ballistics tables are available at hornady.com/ballistics

500 GRAIN BULLETS

SECTIONAL DENSITY:
DIAMETER:

0.341
0.458"



500 gr. DGS®

B.C.: 0.295 C.O.L.: 2.925"
Item No. 4507



500 gr. DGX®

B.C.: 0.295 C.O.L.: 2.925"
Item No. 4505

VELOCITY (FPS – feet per second)

POWDER	1300	1400	1500	1600	1700	1800
IMR 4198			39.1 gr.	41.9 gr.	44.8 gr.	47.6 gr.
Alliant RL-7		38.4 gr.	41.5 gr.	44.5 gr.		
IMR 3031			44.1 gr.	47.1 gr.	50.1 gr.	53.1 gr.
Accurate 2015	39.7 gr.	42.9 gr.	46.1 gr.	49.3 gr.		
IMR 4895	42.4 gr.	45.1 gr.	47.8 gr.	50.5 gr.	53.2 gr.	
H322	42.7 gr.	45.5 gr.	48.3 gr.	51.2 gr.		
IMR 4064	43.4 gr.	46.3 gr.	49.2 gr.	52.1 gr.	55.0 gr.	
VIHT N-135	44.2 gr.	46.8 gr.	49.4 gr.	52.1 gr.	54.8 gr.	

Hornady ballistics tables are available at hornady.com/ballistics