

36

REMINGTON ARMS CO., INC.
RESEARCH DIVISION

RELATIVE STRENGTHS OF HIGH POWER CENTER FIRE RIFLES

MODEL NO.	RECEIVER AREA IN TENSION SQ. IN.	BOLT AREA IN SHEAR SQ. IN.	BOLT AREA IN COMPRESS. SQ. IN.	EXPECTED DEFLECTION OF BOLT & RECEIVER BY YOUNG'S MODULUS $P = 9000 \times C = 5 \times 10^6$ INCHES	BOLT STEEL AISI OR NE NO	NOMINAL YIELD POINT /1000 #/SQ. IN.	LOAD WHICH BOLT SHOULD HOLD WITHOUT PERMANENT DEFORMATION LBS.	BOLT		BARREL SIZE OR PITCH DIA. OF TIRED AT SHANK DIA. IN INCHES	STEEL AISI NO & NOMINAL YIELD POINT #/SQ. IN.	BARREL	
								MEAN PRESSURE POSSIBLE IN. 30-06 CASE = MAX. PROOF #/SQ. IN.	MEAN PRESSURE POSSIBLE IN. 375 H&H CASE = MAX. PROOF #/SQ. IN.			MEAN PRESSURE POSSIBLE IN. 30-06 CASE = MAX. PROOF #/SQ. IN.	MEAN PRESSURE POSSIBLE IN. 375 H&H CASE = MAX. PROOF #/SQ. IN.
720	.443	.397	.109	.0015	2340	190	20,750	82,000	64,000	1.086	X-4130 120,000	58,000	54,000
721	.480	.429	.141	.0013	1335 2340	75 190	10,600 26,800	42,000 106,000	33,000 83,000	1.071	X-4130 120,000	57,000	53,000
1X-760*	.303	.206	.114	.0014	1335 2340	75 190	8,600 21,750	34,000 86,000	27,000 68,000	.897	X-4130 120,000	49,000	44,000
2X-760	.355		.071	.0150	1315 2340	75 190	5,350 13,500	21,000 53,000	17,000 42,000	.892	X-4130 120,000	48,000	43,000
W1903A3	.470	.329	.084	.0020	8620	130	10,900	43,000	34,000	1.011	1350 75,000	34,000	32,000
W-70-W	.537	.400	.086	.0020	Rocke 48	190	16,400	65,000	51,000	.959	X-4130 120,000	52,000	48,000

(*) The Barrel Extension is the Receiver in the 1X-760.

NOTE: The above Force and Pressure figures are theoretical and should be used for comparison only. According to experience actual figures would be higher.

M. H. W.
2-28-44

RELATIVE STRENGTHS OF HIGH POWER CENTER FIRE RIFLES

MODEL NO.	RECEIVER AREA IN TENSION SQ. IN.	BOLT AREA IN SHEAR SQ. IN.	BOLT AREA IN COMPRESS. SQ. IN.	EXPECTED DEFLECTION OF BOLT & RECEIVER BY YOUNG'S MODULUS P = 9000 E = 3x10 ⁶ INCHES.	BOLT STEEL OR A-151 OR E	NOMINAL YIELD POINT 1000 #/SQ. IN.	LOAD WHICH BOLT HOLD WITHOUT PERMANENT DEFORMATION ± 1.45 %/SQ. IN.	BOLT		BARREL SIZE OR FOR TAKING AT SHANK DIA. IN INCHES	STEEL A-151 OR NOMINAL YIELD POINT #/SQ. IN.	BARREL	
								MEAN PRESSURE POSSIBLE IN .375 IN. CASE	MEAN PRESSURE POSSIBLE IN .375 IN. CASE			MEAN PRESSURE POSSIBLE IN .30-06 IN. CASE	MEAN PRESSURE POSSIBLE IN .375 IN. CASE
720	.143	.397	.109	.0015	2340	190	20,750	82,000	64,000	1.086	X-4130 120,000	58,000	54,000
721	.480	.429	.141	.0013	1335 2340	75 190	10,600 26,800	42,000 106,000	33,000 83,000	1.071	X-4130 120,000	57,000	53,000
1X-760*	.303	.206	.114	.0014	1335 2340	75 190	8,600 21,750	34,000 86,000	27,000 68,000	.897	X-4130 120,000	49,000	44,000
2X-760	.355		.071	.0150	1315 2340	75 190	5,350 13,500	21,000 53,000	17,000 42,000	.892	X-4130 120,000	48,000	43,000
M1903A3	.470	.329	.084	.0020	8620	130	10,900	43,000	34,000	1.011	1350 75,000	34,000	32,000
M-70-W	.537	.400	.086	.0020	Rock 45 ^c	190	16,400	65,000	51,000	.959	X-4130 120,000	52,000	48,000

(*) The Barrel Extension is the Receiver in the 1X-760

NOTE: The above Force and Pressure figures are theoretical and should be used for comparison only. According to experience actual figures would be higher.

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26