

NOTE: The pressure values shown in this table are only valid for measurements made using equipment as detailed in ANSI/SAAMI Z299.4 when calibrated and operated in accordance with the procedures therein.

**VELOCITY AND PRESSURE:
VELOCITY AND PRESSURE DATA – TRANSDUCER**

Cartridge	Bullet Weight (gr.)	Velocity (fps) Nominal Mean Instrumental @ 15' Test Bbl.	Pressure Limits (psi/100) ⁽¹⁾		
			Maximum Average Pressure (MAP)	Maximum Probable Lot Mean (MPLM)	Maximum Probable Sample Mean (MPSM)
6 x 45mm	80	2,500	550	564	585
6mm Remington	75	3,400	650	666	691
	80	3,400			
	90	3,175			
	95	3,225			
	100	3,090			
6.5 Creedmore	120	2,900	620	636	660
	129	2,940			
	140	2,690			
6.5 Grendel	123	2,580	520	533	553
6.5mm Remington Magnum	120	3,195	Piezo Pressures Not Established		
6.5mm x 55 Swedish	129	2,750	510	523	542
	140	2,550			
6.5-06 A-Square	100	3,400	650	666	691
	140	2,950			
6.8mm Remington SPC	115	2,610	550	564	585
		2,760			
7mm Mauser (7x57)	139	2,650	510	523	542
		2,820			
	145	2,680			
	154	2,600			
	160	2,500			
7mm Remington Magnum	175	2,420	610	625	648
	125	3,290			
	139	3,150			
		3,230			
	140	2,700			
		3,085			
	150	2,990			
		3,100			
154	3,035				
160-162	2,940				
175	2,850				

⁽¹⁾ Based on sample size η=10.

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**VELOCITY AND PRESSURE:
VELOCITY AND PRESSURE DATA – TRANSDUCER (Cont'd)**

Cartridge	Bullet Weight (gr.)	Velocity (fps) Nominal Mean Instrumental @ 15' Test Bbl.	Pressure Limits (psi/100) ⁽¹⁾		
			Maximum Average Pressure (MAP)	Maximum Probable Lot Mean (MPLM)	Maximum Probable Sample Mean (MPSM)
7mm Remington Short Action Ultra Magnum	140	3,165	650	666	691
	150	3,095			
	160	2,950			
7mm Remington Ultra Magnum	140	3,415	650	666	691
	150	3,315			
	160	3,190			
	175	3,015			
7mm Shooting Times Westerner	140	3,310	650	666	691
	150	3,280			
	160	3,250 3,050			
7mm Weatherby Magnum	140	3,165	650	666	691
	175	2,840			
7mm Winchester Short Magnum	140	3,225	650	666	691
	150	3,200			
	160	2,975			
7mm-08 Remington	120	2,990	610	625	648
	139	2,980			
	140	2,845			
7-30 Waters	120	2,700	450	461	478
7.62x39	123	2,350	450	461	478
7x64 Brenneke	140	2,950	550 (T) ⁽²⁾	564 (T)	585 (T)
	160	2,600			
8mm Mauser (8x57)	170	2,340	350	359	372
8mm Remington Magnum	185	3,065	650	666	691
	200	2,900			
	220	2,815			
9.3 x 62	286	2,360			
17 Hornet	20	3,625	500	513	532
17 Remington	20	4,250	630	646	670
	25	4,000			
17 Remington Fireball	20	3,970	550	564	585
	25	3,850			

⁽¹⁾ Based on sample size $n=10$.

⁽²⁾ T = Tentative

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**VELOCITY AND PRESSURE:
VELOCITY AND PRESSURE DATA – TRANSDUCER (Cont'd)**

Cartridge	Bullet Weight (gr.)	Velocity (fps) Nominal Mean Instrumental @ 15' Test Bbl.	Pressure Limits (psi/100) ⁽¹⁾			
			Maximum Average Pressure (MAP)	Maximum Probable Lot Mean (MPLM)	Maximum Probable Sample Mean (MPSM)	
204 Ruger	32	4,075	575	590	612	
	34	3,990				
	40	3,775				
	45	3,500				
218 Bee	46	2,725	Piezo Pressures Not Established			
22 Hornet	33	3,040	490	502	521	
	34	2,985				
	35	3,040				
	45-46	2,655				
22-250 Remington	35	4,350	650	666	691	
	40	3,975				
		4,125				
	45	4,000				
	50	3,800				
	52	3,740				
220 Swift	53-55	3,650	620	636	660	
	60	3,600				
	40	4,040				
		4,170				
221 Remington Fireball	50	2,975	600 (T)⁽²⁾	615 (T)	638 (T)	
	222 Remington	40	3,370	500	513	532
			3,570			
		50-52	3,110			
222 Remington Magnum	55	3,000	550	564	585	
		3,215				

⁽¹⁾ Based on sample size $n=10$.

⁽²⁾ T = Tentative.

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**VELOCITY AND PRESSURE:
VELOCITY AND PRESSURE DATA – TRANSDUCER (Cont'd)**

Cartridge	Bullet Weight (gr.)	Velocity (fps) Nominal Mean Instrumental @ 15' Test Bbl.	Pressure Limits (psi/100) ⁽¹⁾		
			Maximum Average Pressure (MAP)	Maximum Probable Lot Mean (MPLM)	Maximum Probable Sample Mean (MPSM)
223 Remington	35	3,800	550	564	585
	40	3,650			
	42	3,770			
	45	3,450			
	50	3,550			
	53	3,410			
	55	3,305			
	55	3,050			
	55	3,215			
	60	3,080			
	60	3,200			
	62	3,000			
	62	3,080			
64	3,000				
64	3,070				
69	2,985				
75	2,775				
77	2,785				
223 Winchester Super Short Magnum	55	3,850	650	666	691
	64	3,600			
224 Weatherby Magnum	55	3,545	638	654	678
225 Winchester	55	3,540	Piezo Pressures Not Established		
240 Weatherby Magnum	87	3,465	Piezo Pressures Not Established		
	100	3,350			
243 Winchester	55	3,880	600	615	638
	58	3,730			
	75	3,325			
	80	3,325			
	85-87	3,300			
	90	3,110			
	95	3,050			
	95	3,175			
100	2,950				
100	3,050				
100	3,080				
243 Winchester Super Short Magnum	55	4,125	650	666	691
	95	3,250			
	100	3,110			

⁽¹⁾ Based on sample size η=10.

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**VELOCITY AND PRESSURE:
VELOCITY AND PRESSURE DATA – TRANSDUCER (Cont'd)**

Cartridge	Bullet Weight (gr.)	Velocity (fps) Nominal Mean Instrumental @ 15' Test Bbl.	Pressure Limits (psi/100) ⁽¹⁾		
			Maximum Average Pressure (MAP)	Maximum Probable Lot Mean (MPLM)	Maximum Probable Sample Mean (MPSM)
25 Winchester Super Short Magnum	85	3,470	650	666	691
	110	3,090			
	115	3,060			
	120	2,990			
25-06 Remington	85	3,510	630	646	670
	87	3,420			
	90	3,420			
	100	3,210			
	115	3,100			
	117	2,975			
	120	3,100			
25-20 Winchester	86	1,445	Piezo Pressures Not Established		
25-35 Winchester	117	2,210	Piezo Pressures Not Established		
25-45 Sharps	87	2,850	600	615	638
250 Savage	87	3,010	Piezo Pressures Not Established		
	100	2,800	Piezo Pressures Not Established		
257 Roberts	87	3,150	540	554	575
	100	2,880			
	117	2,630			
257 Roberts +P	100	2,980	580	595	617
	117	2,760			
		2,920			
257 Weatherby Magnum	87	3,845	625	641	665
	100	3,580			
	120	3,335			
260 Remington	120	2,880	600	615	638
	140	2,725			
264 Winchester Magnum	100	3,300	640	656	681
	140	3,015			
270 Weatherby Magnum	100	3,745	625	641	665
	130	3,350			
	150	3,230			

⁽¹⁾ Based on sample size η=10.

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**VELOCITY AND PRESSURE:
VELOCITY AND PRESSURE DATA – TRANSDUCER (Cont'd)**

Cartridge	Bullet Weight (gr.)	Velocity (fps) Nominal Mean Instrumental @ 15' Test Bbl.	Pressure Limits (psi/100) ⁽¹⁾		
			Maximum Average Pressure (MAP)	Maximum Probable Lot Mean (MPLM)	Maximum Probable Sample Mean (MPSM)
270 Winchester	100	3,300	650	666	691
	115	2,695			
		3,050			
	130	3,130			
		3,200			
	135	2,990			
	140	2,950			
		3,090			
		2,830			
270 Winchester Short Magnum	130	3,275	650	666	691
	140	3,125			
	150	3,150			
280 Ackley Improved	140	3,260	650	666	691
280 Remington	120	3,135	600	615	638
	139	3,100			
	140	2,985			
	150	2,875			
		2,975			
284 Winchester	125	3,125	560	574	595
	150	2,845			
30 Carbine ⁽²⁾	110	1,965	400	410	425
30 Remington AR	125	2,775	550	564	585
30 Thompson Center	150	2,985	620	636	660
	165	2,835			

⁽¹⁾ Based on sample size $n=10$.

⁽²⁾ Ballistics based on 20" barrel.

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**VELOCITY AND PRESSURE:
VELOCITY AND PRESSURE DATA – TRANSDUCER (Cont'd)**

Cartridge	Bullet Weight (gr.)	Velocity (fps) Nominal Mean Instrumental @ 15' Test Bbl.	Pressure Limits (psi/100) ⁽¹⁾		
			Maximum Average Pressure (MAP)	Maximum Probable Lot Mean (MPLM)	Maximum Probable Sample Mean (MPSM)
30-06 Springfield	55 (saboted)	4,050	600	615	638
	110	3,300			
	125	2,645			
		3,125			
	150	2,900			
		2,960			
		3,065			
		3,080			
	165	3,015			
	165-168	2,790			
180	2,690				
	2,750				
	2,860				
	2,540				
	2,400				
30-30 Winchester	55 (saboted)	3,365	420	431	447
	125	2,155			
	150	2,550			
		2,370			
		2,440			
	160	2,285			
2,380					
170	2,180				
30-40 Krag	180	2,420	Piezo Pressures Not Established		
	220	2,150			
30-378 Weatherby Magnum	165	3,380	Piezo Pressures Not Established		
	180	3,330			
	200	3,090			
300 AAC Blackout ⁽²⁾	115	2,270	550	564	585
	123	2,280			
	220	1,020			
300 Holland & Holland Magnum	150	3,110	580	595	617
	180	2,870			
	220	2,565			
300 Pegasus	180	3,500	640	656	680

⁽¹⁾ Based on sample size $n=10$.

⁽²⁾ Ballistics based on 16" barrel.

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**VELOCITY AND PRESSURE:
VELOCITY AND PRESSURE DATA – TRANSDUCER (Cont'd)**

Cartridge	Bullet Weight (gr.)	Velocity (fps) Nominal Mean Instrumental @ 15' Test Bbl.	Pressure Limits (psi/100) ⁽¹⁾		
			Maximum Average Pressure (MAP)	Maximum Probable Lot Mean (MPLM)	Maximum Probable Sample Mean (MPSM)
300 Remington Short Action Ultra Magnum	150	3,190	650	666	691
	165	3,065			
	180	2,950			
300 Remington Ultra Magnum	150	2,910	650	666	691
		3,440			
	165	3,200			
		3,350			
	180	2,960			
	3,225				
	200	3,025			
300 Ruger Compact Magnum	150	3,280	650	666	691
	165	3,120			
	180	2,980			
300 Savage	150	2,615	470	482	500
	180	2,340			
300 Weatherby Magnum	180	3,125	650	666	691
	190	2,955			
	220	2,775			
300 Winchester Magnum	150	2,635	640	656	681
		3,275			
		3,390			
	165	3,110			
		3,260			
	180	2,950			
		3,040			
	3,080				
	190	2,875			
	200	2,800			
		2,930			
	220	2,665			
300 Winchester Short Magnum	150	3,300	650	666	691
	165	3,120			
	180	2,970			
303 British	150	2,685	490	503	522
		2,820			
	174	2,500			
	180	2,450			
	215	2,155			

⁽¹⁾ Based on sample size $\eta=10$.

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**VELOCITY AND PRESSURE:
VELOCITY AND PRESSURE DATA – TRANSDUCER (Cont'd)**

Cartridge	Bullet Weight (gr.)	Velocity (fps) Nominal Mean Instrumental @ 15' Test Bbl.	Pressure Limits (psi/100) ⁽¹⁾			
			Maximum Average Pressure (MAP)	Maximum Probable Lot Mean (MPLM)	Maximum Probable Sample Mean (MPSM)	
307 Winchester	150	2,705	Piezo Pressures Not Established			
	180	2,450				
308 Marlin Express	160	2,645	475	487	505	
308 Winchester	55 (saboted)	3,750	620	636	660	
	110	3,150				
	120	3,100				
	125	2,645				
		3,030				
	150	2,800				
		2,900				
	165	2,980				
		2,870				
	165-168	2,880				
2,670						
32 Winchester Special	170	2,235	420	431	447	
	32-20 Winchester	100	1,200	Piezo Pressures Not Established		
	32-40 Winchester	165	1,520	Piezo Pressures Not Established		
	325 Winchester Short Magnum	180	3,050	650	666	691
200		2,940				
220		2,830				
338 Excaliber	250	3,250	640	656	680	
338 Federal	180	2,830	620	636	660	
	185	2,750				
	210	2,630				
338 Lapua Magnum	250	2,950	650	666	691	
	300	2,620				
338 Marlin Express	200	2,550	460	472	489	
338 Remington Ultra Magnum	250	2,850	650	666	691	
338 Ruger Compact Magnum	185	2,970	650	666	691	
	200	2,940				
	225	2,760				

⁽¹⁾ Based on sample size η=10.

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**VELOCITY AND PRESSURE:
VELOCITY AND PRESSURE DATA – TRANSDUCER (Cont'd)**

Cartridge	Bullet Weight (gr.)	Velocity (fps) Nominal Mean Instrumental @ 15' Test Bbl.	Pressure Limits (psi/100) ⁽¹⁾		
			Maximum Average Pressure (MAP)	Maximum Probable Lot Mean (MPLM)	Maximum Probable Sample Mean (MPSM)
338 Winchester Magnum	185	3,075	640	656	681
	200	2,940			
	210	2,855			
	225	2,770			
	230	2,950			
	250	2,750			
	300	2,645			
338-06 A-Square	200	2,750	630	646	670
338-378 Weatherby Magnum	200	3,310	Piezo Pressures Not Established		
	225	3,140			
	250	3,020			
340 Weatherby Magnum	200	3,210	625	641	665
	210	3,200			
	225	2,860			
	250	2,950			
348 Winchester	200	2,505	Piezo Pressures Not Established		
35 Remington	150	2,275	335	343	355
	200	2,055			
		2,200			
35 Whelen	180	2,900	620	636	660
	200	2,660			
	250	2,385			
350 Remington Magnum	200	2,690	Piezo Pressures Not Established		
	225	2,635			
356 Winchester	200	2,370	Piezo Pressures Not Established		
	250	2,075			
358 Shooting Times Alaskan	225	3,100	650	666	691
	275	2,850			
358 Winchester	200	2,475	Piezo Pressures Not Established		
	250	2,215			
370 Sako Magnum	286	2,550	600	615	638

⁽¹⁾ Based on sample size η=10.

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**VELOCITY AND PRESSURE:
VELOCITY AND PRESSURE DATA – TRANSDUCER (Cont'd)**

Cartridge	Bullet Weight (gr.)	Velocity (fps) Nominal Mean Instrumental @ 15' Test Bbl.	Pressure Limits (psi/100) ⁽¹⁾		
			Maximum Average Pressure (MAP)	Maximum Probable Lot Mean (MPLM)	Maximum Probable Sample Mean (MPSM)
375 Holland & Holland Magnum	250	2,670	620	636	660
		2,680			
	270	2,850			
	300	2,515			
		2,680			
375 Remington Ultra Magnum	270		650	666	691
	300	2,750			
375 Ruger	270	2,840	620	636	660
	300	2,660			
375 Winchester	200	2,180	Piezo Pressures Not Established		
	250	1,885			
376 Steyr	270	2,580	620	636	660
378 Weatherby Magnum	270	3,125	Piezo Pressures Not Established		
	300	2,875			
	400	2,605			
38-40 Winchester	180	1,150	Piezo Pressures Not Established		
38-55 Winchester	255	1,300	Piezo Pressures Not Established		
405 Winchester	300	2,200	460	472	489
416 Remington Magnum	350	2,525	650	666	691
	400	2,400			
416 Rigby	400	2,370	520	533	553
416 Ruger	400	2,410	620	636	660
416 Taylor Magnum	400	2,370	650	666	691
416 Weatherby Magnum	400	2,655	Piezo Pressures Not Established		
44 Remington Magnum ⁽³⁾	210	1,900	360	369	382
	240	1,740			
	275	1,565			
44-40 Winchester	200	1,175	110	113	117
	225	1,000			
444 Marlin	240	2,320	420	431	447
	265	2,100			

⁽¹⁾ Based on sample size $n=10$.

⁽²⁾ N/E = Not established.

⁽³⁾ Ballistics based on 20" barrel.

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**VELOCITY AND PRESSURE:
VELOCITY AND PRESSURE DATA – TRANSDUCER (Cont'd)**

Cartridge	Bullet Weight (gr.)	Velocity (fps) Nominal Mean Instrumental @ 15' Test Bbl.	Pressure Limits (psi/100) ⁽¹⁾		
			Maximum Average Pressure (MAP)	Maximum Probable Lot Mean (MPLM)	Maximum Probable Sample Mean (MPSM)
45-70 Government	300	1,830 1,880	280	287	297
	325	2,030			
	375	1,490			
	405	1,150 1,320			
	450 Bushmaster	250 260			
450 Marlin	325	2,175	435	446	463
	350	2,125			
457 Wild West Guns	435	1,950	435	446	463
458 Lott	465	2,380	625	641	665
458 Winchester Magnum	500	2,025 2,240	600	615	638
	510	2,025			
460 Weatherby Magnum	500	2,645	Piezo Pressures Not Established		
470 Capstick	500	2,400	Piezo Pressures Not Established		
470 Nitro Express	500	2,150	410	420	436
475 Turnbull	500	1,900	420	431	447
50-70 Sharps Auto	350	2,360	600	615	638
500 A-Square	600	2,450	638	654	678
577 Tyrannosaur	750	2,420	600	615	638

⁽¹⁾ Based on sample size $n=10$.