



## **Shotshell Reference Ammunition Supplemental Information Tables**

The following tables present information on the characteristics and use of shotshell reference ammunition to validate the operation of ballistic ranges.

For further information see *SAAMI Z299.2-2015 American National Standard Voluntary Industry Performance Standards for Pressure and Velocity of Shotshell Ammunition for the use of Commercial Manufacturers*

**Table 1 – Shot loads**

Gauge / Bore	Length	Type (code)	Shot Weight	Nominal Velocity <sup>(1)</sup>	Shot Size <sup>(2)</sup>
<b>I. LEAD SHOT LOADS</b>					
10 Gauge	3½"	Field (F)	2¼ oz.	1,210 fps	4
12-Gauge	1¾"	Field (F)	15/16 oz.	1,145 fps	8
	2¾"	Field (F)	1¼ oz.	1,330 fps	6
	3"	<i>Corrections for 12-ga 3" chamber test barrels are established using the 2¾" reference round. <sup>(3)</sup></i>			
	3½"	Magnum (M)	2¼ oz.	1,150 fps	4
16 Gauge	2¾"	Field (F)	1⅛ oz.	1,185 fps	6
20 Gauge	2¾"	Field (F)	1 oz.	1,220 fps	6
	3"	<i>Corrections for 20-ga 3" chamber test barrels are established using the 2¾" reference round. <sup>(3)</sup></i>			
28 Gauge	2¾"	Skeet (S)	¾ oz.	1,295 fps	9
	3"	<i>Use 28-ga 2¾" lead shot reference rounds and the assessment in a 3" chamber for testing of lead loads.</i>			
410 Bore	2½"	<i>410 Bore 2½" rounds are tested in a 410 Bore 3" chamber test barrel and corrected with 3" reference rounds.</i>			
	3"	Field (F)	11/16 oz.	1,135 fps	6
<b>II. NON-LEAD SHOT LOADS</b>					
10 Gauge	3½"	Steel (ST)	1¾ oz.	1,260 fps	BB
12 Gauge	2¾"	<i>12-ga 2¾": rounds are tested in a 12-ga 3" chamber test barrel and corrected with 3" reference rounds.</i>			
	3"	Steel (ST)	1¼ oz.	1,375 fps	2
	3½"	Steel (ST)	19/16 oz.	1,300 fps	T
16 Gauge	2¾"	Steel (ST)	15/16 oz.	1,300 fps	2
20 Gauge	2¾"	<i>20-ga 2¾" rounds are tested in a 20-ga 3" chamber test barrel and corrected with 3" reference rounds.</i>			
	3"	Steel (ST)	1 oz.	1,330 fps	2
28 Gauge	2¾"	Steel (ST)	5/8 oz.	1,300 fps	6
	3"	<i>Use 28-ga 2¾" steel shot reference rounds and the assessment in a 3" chamber for testing of non-lead loads.</i>			
410 Bore	2½"	<i>410 Bore 2½" rounds are tested in a 410 Bore 3" chamber test barrel and corrected with 3" reference rounds.</i>			
	3"	<i>Use 410 Bore 3" lead shot reference rounds to establish barrel corrections for testing of non-lead loads.</i>			

- (1) Typical nominal velocity for the load used as reference; this is NOT the assessed velocity and is subject to change.
- (2) Subject to change.
- (3) The 2¾" reference rounds for 12-ga are assessed by firing in 3" chamber test barrels.

**Table 2 – Slug loads**

Gauge / Bore	Length	Slug Type	Slug Weight	Nominal Velocity <sup>(1)</sup>	
				@ 3'	@ 15'
<b>I. RIFLED SLUG LOADS</b>					
10 Gauge	3½"				
12 Gauge	1¾"	Rifled (RS)	1 oz.	1,200 fps	1,180 fps
	2¾"	Rifled (RS)	1⅛ oz.	1,610 fps	1,590 fps
	3"	<i>Corrections for 12-ga 3" chamber test barrels are established using the 2¾" reference round. <sup>(2)</sup></i>			
	3½"				
16 Gauge	2¾"	Rifled (RS)	⅔ oz.	1,600 fps	1,540 fps
20 Gauge	2¾"	Rifled (RS)	¾ oz.	1,570 fps	1,540 fps
	3"	<i>Corrections for 20-ga 3" chamber test barrels are established using the 2¾" reference round. <sup>(2)</sup></i>			
28 Gauge	2¾"	Rifled (RS) <sup>(3)</sup>	oz.	fps	fps
	3"				
410 Bore	2½"	<i>410 Bore 2½" rounds are tested in a 410 Bore 3" chamber test barrel and corrected with 3" reference rounds.</i>			
	3"	Rifled (RS)	¼ oz.	1,830 fps	1,780 fps
<b>II. SABOTED SLUG LOADS</b>					
10 Gauge	3½"				
12 Gauge	1¾"				
	2¾"	Saboted (SS)	1⅛ oz.	1,345 fps	1,320 fps
	3"	<i>Corrections for 12-ga 3" chamber test barrels are established using the 2¾" reference round. <sup>(2)</sup></i>			
	3½"				
16 Gauge	2¾"				
20 Gauge	2¾"	Saboted (SS)	⅝ oz.	1,600 fps	1,580 fps
	3"	<i>Corrections for 20-ga 3" chamber test barrels are established using the 2¾" reference round. <sup>(2)</sup></i>			
28 Gauge	2¾"				
	3"				
410 Bore	2½"				
	3"				

- (1) Subject to change.
- (2) The 2¾" reference rounds for 12-ga and 20-gauge are assessed by firing in 3" chamber test barrels.
- (3) This designation is assigned and reserved for future use; no reference exists currently.

**Table 3 - Reference Round Application**

<b>Load Type:</b>	<b>LEAD SHOT</b>	<b>NON-LEAD SHOT</b>	<b>RIFLED SLUGS</b>	<b>SABOTED SLUGS</b>
<b>Test barrel:</b>	Full choke	IC choke	Full choke	Rifled
<b>Velocity Assessment(s):</b>	Coils @ 3'	Coils @ 3' Screens @ 6'	Coils @ 3' Screens @ 15'	Coils @ 3' Screens @ 15'
10 Ga. 3½"	10F	103.5ST		
12 Ga. 1¾"	121.75F <sup>(1)</sup>		121.75RS <sup>(1)</sup>	
12 Ga. 2¾"	12F <sup>(2)</sup>	(3)	12RS <sup>(2)</sup>	12SS <sup>(2)</sup>
12 Ga. 3"		123MST <sup>(2)(3)</sup>		
12 Ga. 3½"	123.5M	123.5ST		
16 Ga. 2¾"	16F	16ST	16RS	
20 Ga. 2¾"	20F <sup>(2)</sup>	(3)	20RS <sup>(2)</sup>	20SS <sup>(2)</sup>
20 Ga. 3"		203ST <sup>(2)(3)</sup>		
28 Ga. 2¾" 28 Ga. 3"	28S <sup>(4)</sup>	28ST <sup>(4)</sup>	28RS <sup>(5)</sup>	
410 bore 2½"	(6)			
410 bore 3"	413F	413F <sup>(7)</sup>	413RS	

**NOTES:**

1. Testing of 12 ga. 1¾" lead shot and rifled slug ammunition is performed in 1¾" chamber test barrels and corrected with the applicable 1¾" SAAMI reference rounds for the type/shot material being tested. The use of test barrel with a 2¾" chamber is an acceptable alternative when testing 1¾" lead shot and rifled slug loads and results are to be corrected using reference rounds appropriate to the 2¾" test barrel.
2. Testing of all 12- and 20-gauge 2¾" and 3" ammunition is performed in 3" chamber test barrels and corrected with the applicable SAAMI reference rounds for the type/shot material being tested. For testing of 2¾" lead shot, rifled slug, and sabotated slug loads use of a 2¾" chamber test barrel is an acceptable alternative. **Reference round assessment firings are performed in 3" chamber test barrels.** No adjustment or correction is applied to the assessment values when using reference rounds in 2¾" chamber test barrels.
3. For testing of 12 ga. and 20 ga. non-lead shot loads, only the use of a 3" chamber test barrel is recognized.
4. 28 ga. 2¾" ammunition is to be tested in a 2¾" chamber and 3" ammunition in a 3" chamber. Corrections are developed using 2¾" reference rounds in both chamber lengths. Separate assessments are maintained for the firing of the reference rounds in each chamber length and the assessment for the chamber in use shall be used.
5. The designation "28RS" is reserved for future use.
6. All types of 410-bore 2½" rounds are tested in a 3" chamber test barrel of the appropriate choke/bore treatment for the type of payload under test.
7. Test barrel corrections for 410-bore non-lead shot loads are established using applicable SAAMI lead shot reference rounds.