

PRECISION



THROUGH PASSION

**norma** USA<sup>®</sup>





## OVER A HUNDRED YEARS OF DEDICATION, COMMITMENT AND QUALITY.

### OUR PHILOSOPHY

Welcome to the Norma world of precision, excitement, reward and continuous renewal! When does the hunt start - when is it really over? For the true hunter the answer is easy, it's a journey that once begun never really ends. As every journey has its peak moments – the heart of the moment when you feel your heart pounding, the palm of your hand getting moist, the target is in the perfect position and you pull the trigger – and you know that Norma will deliver the expected result, over and over again.

Many of us at Norma are also keen hunters and shooters, with numerous Olympic-, World, and European championship medals proving that we know what we speak about. Thorough preparations are required to make the score and beat records. Just like the day on the range or in the field, every day in our modern production facility begins with reinforcing the target to

perform even better than yesterday. Precision is the key word, the mantra we all repeat. Just to make sure we don't ever forget, it's even incorporated in our company name; Norma Precision AB.

Hitting the target, predictably every time, is a key objective for every hunter and sport shooter. Norma has successfully fulfilled the demands of the global hunting and sport shooting community for over a century, always being contemporary, always being reliable. At Norma, precision begins with selecting the right materials, employing and training the best people, and running state-of-the-art machinery that turns out the correct product every time. We test each production batch several times whilst the components are being manufactured, and no product leaves our premises before it has proven that it delivers what is expected. We know that when you use a Norma product you can focus

110% on your target, no need to be distracted by worry how the cartridge will perform when you put it to work.

For over 110 years Norma has enjoyed the trust of the global hunting and shooting community. Our every action is aimed towards making sure this trust is reinforced every time you use a Norma product. Our promise to the shooting community is simple – quality in every aspect, unmatched precision every time. Failure is not an option! We are only satisfied when you are satisfied!

PAUL-ERIK TOIVO, CEO  
NORMA PRECISION AB

# norma USA<sup>®</sup>

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[www.norma-usa.com](http://www.norma-usa.com)

# THE QUALITY OF OUR PEOPLE...

## LAB

Raw materials that arrive at Norma are first sent for receiving inspection in the lab, where a variety of specialists meticulously measure, weigh, and verify the qualities demanded have been delivered. The lab also inspects samples pulled from a variety of production processes to ensure machines and the people running them are in sync. In the cartridge case department, the lab works closely with the Machine Setter to determine “all systems go” before beginning a production run. The raw material structure, hardness, and measurements are checked and verified throughout.

## CARTRIDGE CASE DEPARTMENT

Quality Control procedure and inspection are critical in case production. There are continuous inspection points from start to finish, 15-20 in

total for most cases. Five of every 300 cases produced are put through rigorous measurements of size and hardness, while each and every case must pass through measurement tools and a final visual inspection.

## THE BULLET DEPARTMENT

Extreme precision in tooling is required to produce bullets of high consistency and concentricity. To achieve top precision, the smallest possible deviations in balance, jacket wall-thickness, diameter, weight and length are crucial. Therefore, it is important to carefully inspect jacket production. The final proof of precision comes back in the lab. Samples are pulled from every production run and test fired for precision. In addition to accuracy testing, hunting bullets are routinely tested for proper expansion qualities as well.

## TOOLS AND MAINTENANCE

All production tools are manufactured right on site by Norma's own toolmakers, and all tools are inspected according to routine schedules. We measure all production tools with a device that has an accuracy

When the ambition is to produce the world's best components and cartridges, one must begin with the best raw materials to be found. Careful inspection and quality assurance procedures begin at the arrival of raw materials, and continue through each step of the manufacturing process, ensuring only the best of the best bear the Norma name.



# REFLECTS THE QUALITY OF OUR PRODUCT

## THE LOADING DEPARTMENT

Cases and bullets of top quality are the starting point for loading of Norma cartridges, and the loading process itself will ensure that the finished product is also of top quality.

It is important that a bullet seats with proper neck tension, and that each primer seats properly in the pocket. The cartridge must be loaded with powder that is optimal for the caliber, case volume, and the bullet weight, in order to achieve the desired muzzle velocity and the best precision that the cartridge can perform. To find the best powder, all powder batches are tested for velocity and pressure. The maximum operating pressure should also be correct in relation to the CIP standards.

of up 1/10000 mm, and which in turn is regularly calibrated. In Norma's production facility there are 2,517 measuring instruments used, and all are inspected and calibrated at fixed intervals.

## THE BALLISTIC DEPARTMENT

With each new run, the respective cartridges are fired and measured for inspection of velocity, pressure, consistency, and concentricity. These tests are conducted throughout the production cycle.

All new powders and batches of powder are tested in the same way. Cartridges from production are regularly taken out for test shooting, to ensure the same quality from the first to the last cartridge in the series.

## LAST BUT NOT LEAST...OUR STAFF

Without skilled and capable people, the most modern and sophisticated machine and inspection instrument cannot produce quality cartridges. For you and for Norma, it is the combination of the person, the machine and the measuring instrument that is the most important guarantee of cartridges of the finest quality!



# AMERICAN PH





Precision defines the quality of components and loads selected for Norma's American PH line-up.

Production at Norma starts with the highest quality brass cases available in the industry, Norma powder, and bullets specifically selected for North American big game! Most loads feature Norma's

tried and true Oryx bonded bullet for maximum penetration and near 100% weight retention.

To ensure perfect mushrooming, the Oryx has a thin forward Jacket with internal splitting zones and a thicker rear jacket to ensure high residual weight after impact. The Oryx has rapid expansion, excellent



penetration and high energy transfer; perfect for the North American Big Game hunter!

The lead free Kalahari bullet is a lighter bullet that is designed for higher velocities and flat trajectories. Loaded under the strictest standards, this unique bullet is loaded with selected lots of powder to ensure the highest velocities possible.









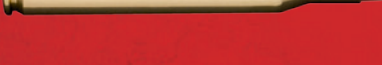

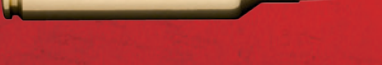

Bullet expansion is controlled to ensure maximum terminal effect and guaranteed deep penetration. Kalahari sets the standard for ammunition used where challenging environments and long shots are the rule, not the exception.

Norma Precision—the right ammunition for the Professional Hunter.




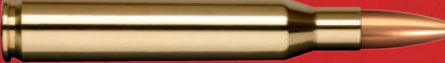






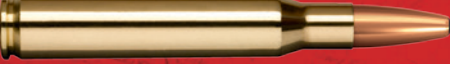
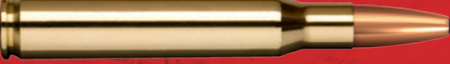


*Professional Hunter*

# BALLISTIC DATA - HUNTING AMMUNITION













	BULLET TYPE BULLET WEIGHT g/gr PRODUCT NUMBER	BALLISTIC COEFFICIENT	VELOCITY FEET PER SECOND				ENERGY FOOT POUNDS				ZERO RANGE YARDS	HEIGHT OF TRAJECTORY ABOVE LINE OF SIGHT IF SIGHTED IN AT ⊕ YARDS. FOR SIGHTS 1.6 INCH ABOVE BORE					WIND DRIFT IN INCHES FOR A 10 M.P.H. CROSS WIND		
			V <sub>0</sub>	V <sub>100</sub>	V <sub>200</sub>	V <sub>300</sub>	E <sub>0</sub>	E <sub>100</sub>	E <sub>200</sub>	E <sub>300</sub>		50	100	150	200	300 YDS	100	200	300 YDS
243 WIN.		ORYX 6,5 g/100 gr # 20160332	0,261	2990	2633	2303	1997	1986	1540	1178	886	50	⊕ 0,5	-0,26	-2,45	-12	1,05	4,45	10,72
												100	-0,25	⊕ -1,01	-3,45	-13,49			
												150	0,09	0,67	⊕ -2,1	-11,48			
												200	0,61	1,72	1,58	⊕ -8,32			
.257 ROBERTS		SOFT POINT 6,5 g/100 gr # 20166042	0,256	3035	2668	2329	2016	2046	1581	1205	902	50	⊕ 0,53	-0,17	-2,26	-11,51	1,16	4,95	11,92
												100	-0,26	⊕ -0,96	-3,32	-13,09			
												150	0,06	0,64	⊕ -2,04	-11,17			
												200	0,57	1,66	1,53	⊕ -8,11			
6XC		ORYX 6,5 g/100 gr # 20160222	0,257	2953	2594	2262	1955	1937	1494	1136	849	50	⊕ 0,5	-0,4	-2,7	-12,7	1,2	5,1	12,4
												100	-0,2	⊕ -1,1	-3,6	-14,1			
												150	0,1	0,7	⊕ -2,2	-11,9			
												200	0,7	1,8	1,6	⊕ -8,7			
6,5 JAP.		ALASKA 10,1 g/156 gr # 20166202	0,326	2067	1835	1622	1431	1480	1167	911	710	50	⊕ -0,7	-4,0	-10,2	-32,9	1,6	6,6	15,8
												100	0,4	⊕ -2,9	-8,8	-30,8			
												150	1,3	2,0	⊕ -4,9	-25,0			
												200	2,5	4,4	3,7	⊕ -17,7			
6,5 CARC.		ALASKA 10,1 g/156 gr # 20166212	0,326	2330	2082	1849	1636	1881	1501	1185	927	50	⊕ -0,2	-2,4	-6,8	-23,7	1,3	5,6	13,3
												100	0,1	⊕ -2,1	-6,5	-23,1			
												150	0,8	1,4	⊕ -3,7	-18,9			
												200	1,7	3,2	2,7	⊕ -13,5			
6,5X55		ORYX 10,1 g/156 gr # 20166052	0,348	2559	2313	2081	1862	2267	1852	1499	1201	50	⊕ 0,1	-1,4	-4,7	-17,5	1,1	4,5	10,7
												100	-0,1	⊕ -1,6	-4,9	-17,9			
												150	0,5	1,0	⊕ -2,8	-14,8			
												200	1,2	2,5	2,1	⊕ -10,5			
6,5-284 NORMA		ORYX 10,1 g/156 gr # 20166062	0,348	2790	2531	2287	2056	2697	2220	1812	1465	50	⊕ 0,4	-0,6	-3,1	-13,3	0,9	4,0	9,4
												100	-0,2	⊕ -1,2	-3,8	-14,4			
												150	0,2	0,8	⊕ -2,3	-12,0			
												200	0,8	1,9	1,7	⊕ -8,6			
270 WIN.		ORYX 9,7 g/150 gr # 20169472	0,373	2854	2608	2376	2155	2714	2267	1880	1547	50	⊕ -0,3	-0,6	-3,0	-12,4	0,9	3,6	8,4
												100	-0,2	⊕ -1,1	-3,6	-13,4			
												150	0,2	0,7	⊕ -2,1	-11,2			
												200	0,7	1,8	1,6	⊕ -8,0			
270 WSM		KALAHARI 7,8 g/120 gr # 20169462	0,314	3248	2932	2637	2361	2812	2291	1853	1485	50	⊕ 0,6	0,2	-1,3	-8,1	0,9	3,6	8,4
												100	-0,3	⊕ -0,7	-2,5	-9,9			
												150	-0,1	0,5	⊕ -1,6	-8,5			
												200	0,3	1,2	1,2	⊕ -6,2			
270 WSM		ORYX 9,7 g/150 gr # 20169492	0,373	3117	2856	2611	2378	3237	2718	2271	1884	50	⊕ 0,5	0,0	-1,7	-9,1	0,8	3,2	7,4
												100	-0,3	⊕ -0,8	-2,8	-10,7			
												150	0,0	0,5	⊕ -1,7	-9,1			
												200	0,4	1,4	1,3	⊕ -6,5			
270 WSM		KALAHARI 7,8 g/120 gr # 20169482	0,314	3480	3146	2837	2548	3228	2638	2145	1731	50	⊕ 0,7	0,5	-0,6	-6,3	0,8	3,3	7,8
												100	-0,4	⊕ -0,5	-2,0	-8,4			
												150	-0,2	0,4	⊕ -1,3	-7,3			
												200	0,2	1,0	1,0	⊕ -5,4			
7X57		ORYX 10,1 g/156 gr # 20170012	0,330	2641	2377	2128	1894	2417	1957	1569	1243	50	⊕ 0,2	-1,1	-4,2	-16,2	1,0	4,1	9,8
												100	-0,1	⊕ -1,4	-4,6	-16,9			
												150	0,4	1,0	⊕ -2,7	-14,0			
												200	1,0	2,3	2,0	⊕ -10,0			



# BALLISTIC DATA - HUNTING AMMUNITION

	BULLET TYPE BULLET WEIGHT g/gr PRODUCT NUMBER	BALLISTIC COEFFICIENT	VELOCITY FEET PER SECOND				ENERGY FOOT POUNDS				ZERO RANGE YARDS	HEIGHT OF TRAJECTORY ABOVE LINE OF SIGHT IF SIGHTED IN AT ⊕ YARDS. FOR SIGHTS 1.6 INCH ABOVE BORE					WIND DRIFT IN INCHES FOR A 10 M.P.H. CROSS WIND			
			V <sub>0</sub>	V <sub>100</sub>	V <sub>200</sub>	V <sub>300</sub>	E <sub>0</sub>	E <sub>100</sub>	E <sub>200</sub>	E <sub>300</sub>		50	100	150	200	300 YDS	100	200	300 YDS	
			⊕																	
7MM-08 REM.		ORYX 10,1 g/156 gr # 20171012	0,330	2725	2457	2204	1966	2573	2091	1683	1339	50	0,3	-0,84	-3,58	-14,65	1,03	4,35	10,34	
												100	-0,15	⊕	-1,29	-4,18				-15,56
												150	0,28	0,86	⊕	-2,46				-12,98
												200	0,89	2,09	1,85	⊕				-9,28
280 REM.		KALAHARI 8,1 g/125 gr # 20171042	0,315	3115	2809	2523	2254	2694	2191	1767	1411	50	⊕	0,5	-0,1	-1,9	-9,8	0,9	3,8	8,89
												100	-0,3	⊕	-0,9	-2,9	-11,3			
												150	0,0	0,6	⊕	-1,8	-9,6			
												200	0,5	1,5	1,3	⊕	-7,0			
7MM REM. MAG.		ORYX 10,1 g/156 gr # 20171052	0,330	2789	2516	2259	2017	2695	2193	1768	1410	50	⊕	0,4	-0,7	-3,2	-13,6	0,9	3,8	9,0
												100	-0,2	⊕	-1,2	-3,9	-14,7			
												150	0,2	0,8	⊕	-2,3	-12,3			
												200	0,8	2,0	1,7	⊕	-8,8			
7MM REM. MAG.		KALAHARI 8,1 g/125 gr # 20171032	0,315	3347	3024	2724	2444	3110	2539	2061	1658	50	⊕	0,7	0,4	-1,0	-7,2	0,8	3,4	8,1
												100	-0,3	⊕	-0,6	-2,3	-9,2			
												150	-0,1	0,4	⊕	-1,5	-8,0			
												200	0,2	1,1	1,1	⊕	-5,8			
7MM REM. MAG.		ORYX 10,1 g/156 gr # 20171022	0,330	2953	2670	2404	2153	3021	2470	2002	1607	50	⊕	0,5	-0,2	-2,3	-11,1	0,8	3,5	8,3
												100	-0,3	⊕	-1,0	-3,3	-12,6			
												150	0,1	0,6	⊕	-2,0	-10,7			
												200	0,6	1,7	1,5	⊕	-7,7			
308 WIN.		KALAHARI 9,7 g/150 gr # 20174952	0,304	2854	2555	2275	2013	2261	1812	1437	1125	50	⊕	0,4	-0,5	-2,9	-12,5	1,0	4,3	10,3
												100	-0,2	⊕	-1,1	-3,6	-13,6			
												150	0,2	0,7	⊕	-2,2	-11,5			
												200	0,7	1,8	1,6	⊕	-8,2			
308 WIN.		ORYX 10,7g/165 gr # 20174842	0,333	2740	2473	2221	1985	2751	2241	1808	1444	50	⊕	0,3	-0,8	-3,5	-14,3	0,9	3,9	9,1
												100	-0,2	⊕	-1,3	-4,1	-15,3			
												150	0,3	0,8	⊕	-2,4	-12,8			
												200	0,9	2,1	1,8	⊕	-9,1			
308 WIN.		ORYX 11,7 g/180 gr # 20174942	0,354	2610	2366	2134	1916	2723	2237	1821	1468	50	⊕	0,1	-1,4	-4,6	-16,9	1,0	4,3	10,2
												100	-0,1	⊕	-1,5	-4,7	-17,1			
												150	0,5	1,0	⊕	-2,7	-14,1			
												200	1,1	2,4	2,0	⊕	-10,0			
30-06		KALAHARI 9,7 g/150gr # 20174932	0,304	2985	2677	2390	2120	2968	2388	1902	1497	50	⊕	0,4	-0,4	-2,6	-11,6	1,0	4,2	10,0
												100	-0,2	⊕	-1,0	-3,4	-12,9			
												150	0,1	0,7	⊕	-2,0	-10,9			
												200	0,6	1,7	1,5	⊕	-7,8			
30-06		ORYX 10,7 g/165 gr # 20174832	0,338	2953	2673	2410	2162	3196	2619	2129	1713	50	⊕	0,4	-0,4	-2,6	-11,6	0,8	3,5	8,2
												100	-0,2	⊕	-1,0	-3,4	-12,8			
												150	0,1	0,7	⊕	-2,0	-10,7			
												200	0,7	1,7	1,5	⊕	-7,7			
308 NORMA MAG.		ORYX 11,7 g/180 gr # 20174922	0,354	2700	2451	2215	1992	2914	2401	1961	1586	50	⊕	0,2	-1,1	-3,9	-15,2	1,0	4,1	9,7
												100	-0,1	⊕	-1,4	-4,3	-15,7			
												150	0,4	0,9	⊕	-2,5	-13,0			
												200	1,0	2,2	1,9	⊕	-9,3			
308 NORMA MAG.		ORYX 11,7 g/180 gr # 20174912	0,354	2950	2687	2438	2203	3479	2885	2376	1940	50	⊕	0,4	-0,4	-2,5	-11,3	0,9	3,6	8,5
												100	-0,2	⊕	-1,0	-3,3	-12,5			
												150	0,1	0,7	⊕	-2,0	-10,5			
												200	0,6	1,7	1,5	⊕	-7,5			

# BALLISTIC DATA - HUNTING AMMUNITION

	BULLET TYPE BULLET WEIGHT g/gr PRODUCT NUMBER	BALLISTIC COEFFICIENT	VELOCITY FEET PER SECOND				ENERGY FOOT POUNDS				ZERO RANGE, YARDS	HEIGHT OF TRAJECTORY ABOVE LINE OF SIGHT IF SIGHTED IN AT $\oplus$ YARDS. FOR SIGHTS 1.6 INCH ABOVE BORE					WIND DRIFT IN INCHES FOR A 10 M.P.H. CROSS WIND			
			V <sub>0</sub>	V <sub>100</sub>	V <sub>200</sub>	V <sub>300</sub>	E <sub>0</sub>	E <sub>100</sub>	E <sub>200</sub>	E <sub>300</sub>		50	100	150	200	300 YDS	100	200	300 YDS	
300 WIN. MAG			KALAHARI 10,0g/155gr # 20174902	0,305	3280	2952	2648	2363	3704	3001	2413	1922	50 100 150 200	$\oplus$ 0,6 -0,3 -0,1 0,3	0,2 $\oplus$ -0,7 0,5 1,3	-1,3 -2,5 -1,6 $\oplus$ -6,2	-8,2 -10 -8,6	0,9	3,7	8,7
			ORYX 10,7g/165 gr # 20174822	0,333	3200	2904	2628	2367	3753	3091	2530	2053	50 100 150 200	$\oplus$ 0,6 -0,3 0,0 0,4	0,1 $\oplus$ -0,8 0,5 1,3	-1,5 -2,6 -1,6 $\oplus$ -6,4	-8,6 -10,3 -8,8	0,8	3,1	7,4
			ORYX 11,7 g/180 gr # 20174892	0,354	2920	2658	2411	2177	3409	2825	2324	1895	50 100 150 200	$\oplus$ 0,4 -0,2 0,2 0,7	-0,5 $\oplus$ -1,0 0,7 $\oplus$ -2,2	-2,7 -11,7 -12,9 -11,7	-8,4	0,9	3,7	8,6
300 WSM			KALAHARI 10,0 g/155 gr # 20174882	0,305	3250	2925	2622	2339	3636	2944	2366	1883	50 100 150 200	$\oplus$ 0,6 -0,3 -0,1 0,4	0,2 $\oplus$ -0,7 0,5 1,3	-1,4 -2,6 -1,6 $\oplus$ -6,4	-8,5 -10,2 -8,8	0,9	3,7	8,8
			ORYX 10,7g/165 gr # 20174812	0,333	3182	2888	2612	2352	3711	3056	2500	2028	50 100 150 200	$\oplus$ 0,6 -0,3 0,0 0,4	0,1 $\oplus$ -0,8 0,5 1,3	-1,6 -8,8 -10,5 -9,0	-6,5	0,8	3,1	7,4
			ORYX 11,7 g/180 gr # 20174872	0,354	2950	2687	2438	2203	3479	2885	2376	1940	50 100 150 200	$\oplus$ 0,4 -0,2 0,1 0,6	-0,4 $\oplus$ -1,0 0,7 1,7	-2,5 -11,3 -12,5 -10,5	-7,5	0,9	3,6	8,5
300 RUM			KALAHARI 10,0 g/155 gr # 20174802	0,305	3360	3026	2717	2427	3887	3153	2541	2029	50 100 150 200	$\oplus$ 0,75 -0,37 -0,18 0,18	0,54 $\oplus$ -0,58 0,38 1,11	-0,72 -6,92 -9,15 -8	-5,84	0,85	3,55	8,4
			ORYX 10,7g/165 gr # 20174792	0,333	3360	3051	2762	2492	4137	3410	2796	2275	50 100 150 200	$\oplus$ 0,75 -0,38 -0,19 0,16	0,57 $\oplus$ -0,56 0,37 1,07	-0,64 -6,61 -8,87 -7,75	-5,65	0,78	3,26	7,67
			ORYX 11,7 g/180 gr # 20174782	0,354	3250	2968	2704	2454	4223	3522	2922	2408	50 100 150 200	$\oplus$ 0,7 -0,35 -0,14 0,24	0,41 $\oplus$ -0,64 0,42 1,18	-0,96 -7,39 -9,48 -8,21	-5,95	0,76	3,15	
7,65 ARG.			SOFT POINT 11,3 g/174 gr # 20177002	0,262	2493	2174	1879	1612	2402	1826	1364	1004	50 100 150 200	$\oplus$ -0,1 0,1 0,7 1,5	-2,1 $\oplus$ -1,9 1,3 3,0	-6,1 -22,1 -5,9 -17,8	-12,9	1,5	6,5	15,6
7,7 JAP.			SOFT POINT 11,3 g/174 gr # 20177202	0,262	2493	2174	1879	1612	2402	1826	1364	1004	50 100 150 200	$\oplus$ -0,1 0,1 0,7 1,5	-2,1 $\oplus$ -1,9 1,3 3,0	-6,1 -22,1 -5,9 -17,8	-12,9	1,5	6,5	15,6
338 WIN. MAG.			ORYX 14,9 g/230 gr # 20185162	0,370	2756	2514	2284	2066	3880	3228	2665	2181	50 100 150 200	$\oplus$ 0,3 -0,1 0,3 0,9	-0,9 $\oplus$ -1,3 0,8 2,0	-3,5 -14,0 -14,7 -12,2	-8,7	0,9	3,8	8,9

# BALLISTIC DATA - HUNTING AMMUNITION







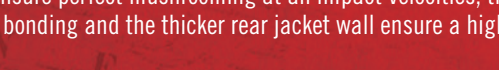

	BULLET TYPE BULLET WEIGHT g/gr PRODUCT NUMBER	BALLISTIC COEFFICIENT	VELOCITY FEET PER SECOND				ENERGY FOOT POUNDS				ZERO RANGE YARDS	HEIGHT OF TRAJECTORY ABOVE LINE OF SIGHT IF SIGHTED IN AT ⊕ YARDS. FOR SIGHTS 1.6 INCH ABOVE BORE					WIND DRIFT IN INCHES FOR A 10 M.P.H. CROSS WIND		
			V <sub>0</sub>	V <sub>100</sub>	V <sub>200</sub>	V <sub>300</sub>	E <sub>0</sub>	E <sub>100</sub>	E <sub>200</sub>	E <sub>300</sub>		50	100	150	200	300 YDS	100	200	300 YDS
8X57 JS	ORyx 12,7 g/196 gr # 20180042	0,331	2526	2269	2027	1802	2778	2241	1789	1413	50 100 150 200	⊕ ⊕ ⊕ ⊕	0,1 -1,7 1,1 2,6	-1,5 -5,2 -3,0 2,2	-5,0 -18,6 -15,6 ⊕	-18,6 -18,9 -17,6 -11,1	1,2	4,9	11,6
8X57 JRS	ORyx 12,7 g/196 gr # 20180102	0,331	2395	2146	1912	1695	2497	2004	1591	1251	50 100 150 200	⊕ ⊕ ⊕ ⊕	-0,1 -1,9 1,3 3,0	-2,1 -6,0 -3,4 2,6	-6,2 -21,5 -17,6 ⊕	-21,8 -21,5 -17,6 -12,6	1,3	5,3	12,6
9,3X57	ORyx 15,0 g/232 gr # 20193092	0,267	2362	2058	1778	1528	2875	2182	1630	1203	50 100 150 200	⊕ ⊕ ⊕ ⊕	-0,3 -2,2 1,5 3,4	-2,6 -6,8 -3,8 2,9	-7,4 -24,6 -20,2 ⊕	-25,5 -24,6 -20,2 -14,5	1,6	6,9	16,6
9,3X62	ORyx 15,0 g/232 gr # 20193002	0,267	2625	2302	2002	1728	3551	2731	2066	1539	50 100 150 200	⊕ ⊕ ⊕ ⊕	0,1 -1,6 1,1 2,6	-1,5 -5,1 -3,0 2,2	-5,0 -19,0 -15,7 ⊕	-18,8 -19,0 -15,7 -11,3	1,4	5,9	14,1
	ORyx 18,5 g/285 gr # 20193342	0,330	2362	2115	1883	1669	3544	2841	2252	1769	50 100 150 200	⊕ ⊕ ⊕ ⊕	-0,1 -2,0 1,3 3,1	-2,2 -6,2 -3,5 2,6	-6,5 -22,3 -18,3 ⊕	-22,7 -22,3 -18,3 -13,0	1,3	5,4	12,8
9,3X74R	ORyx 15,0 g/232 gr # 20193282	0,267	2530	2214	1922	1656	3298	2527	1904	1413	50 100 150 200	⊕ ⊕ ⊕ ⊕	0,05 -1,75 1,17 2,77	-1,68 -5,54 -3,21 2,41	-5,44 -20,42 -17,07 ⊕	-20,42 -20,57 -17,07 -12,25	1,44	6,17	14,9
	ORyx 18,5 g/285 gr # 20193382	0,330	2329	2084	1854	1642	3440	2753	2180	1710	50 100 150 200	⊕ ⊕ ⊕ ⊕	-0,2 -2,1 1,4 3,2	-2,4 -6,5 -3,7 2,7	-6,8 -23,1 -18,9 ⊕	-23,6 -23,1 -18,9 -13,4	1,3	5,5	13,1
	ORyx 19,4 g/300 gr # 20195002	0,320	2559	2292	2041	1807	4363	3500	2775	2176	50 100 150 200	⊕ ⊕ ⊕ ⊕	0,0 -1,7 1,1 2,6	-1,6 -5,2 -3,0 2,2	-5,1 -18,7 -15,4 ⊕	-18,6 -18,7 -15,4 -11,0	1,2	5,0	11,8

## KALAHARI

Revolutionary shape offers best possible ballistic coefficient and reduces drag, flattening the trajectory and reducing wind drift. Pre fragmented hollow point to ensure even opening of the cavity into petals with sharp cutting edges.



# BALLISTIC DATA - WEATHERBY

	BULLET TYPE BULLET WEIGHT g/gr PRODUCT NUMBER	BALLISTIC COEFFICIENT	VELOCITY FEET PER SECOND				ENERGY FOOT POUNDS				ZERO RANGE, YARDS	HEIGHT OF TRAJECTORY ABOVE LINE OF SIGHT IF SIGHTED IN AT ⊕ YARDS. FOR SIGHTS 1.6 INCH ABOVE BORE					WIND DRIFT IN INCHES FOR A 10 M.P.H CROSS WIND			
			V <sub>0</sub>	V <sub>100</sub>	V <sub>200</sub>	V <sub>300</sub>	E <sub>0</sub>	E <sub>100</sub>	E <sub>200</sub>	E <sub>300</sub>		50	100	150	200	300 YDS	100	200	300 YDS	
			⊕																	
.257 WBY		SOFT POINT 6,5 g/100 gr # 20166082	0,256	3510	3101	2729	2386	2736	2136	1654	1264	50	0,8	0,7	-0,43	-6,36	0,97	4,08	9,73	
												100	-0,4	⊕	-0,5	-2,03				-8,77
												150	-0,23	0,34	⊕	-1,36				-7,76
												200	0,11	1,02	1,02	⊕				-5,71
.270 WBY		SOFT POINT 8,4 g/130 gr # 20169502	0,359	3280	3000	2737	2489	3106	2599	2163	1789	50	⊕	0,72	0,47	-0,84	-7,05	0,74	3,07	7,2
												100	-0,36	⊕	-0,61	-2,27	-9,2			
												150	-0,16	0,4	⊕	-1,46	-7,98			
												200	0,21	1,14	1,1	⊕	-5,79			
7MM WBY		DRYX 9,7 g/150 gr # 20169512	0,373	3180	2916	2668	2432	3369	2833	2371	1971	50	⊕	0,66	0,3	-1,17	-7,9	0,74	3,06	7,19
												100	-0,33	⊕	-0,69	-2,5	-9,89			
												150	-0,1	0,46	⊕	-1,58	-8,51			
												200	0,29	1,25	1,18	⊕	-6,15			
7MM WBY		DRYX 10,1 g/156 gr # 20171062	0,33	3085	2794	2522	2265	3298	2706	2203	1778	50	⊕	0,59	0,07	-1,68	-9,45	0,87	3,65	8,63
												100	-0,3	⊕	-0,82	-2,87	-11,22			
												150	-0,02	0,55	⊕	-1,78	-9,59			
												200	0,42	1,43	1,33	⊕	-6,92			
7MM WBY		DRYX 11 g/170 gr # 20171072	0,324	2985	2696	2424	2169	3364	2744	2219	1776	50	⊕	0,52	-0,16	-2,16	-10,78	0,93	3,9	9,24
												100	-0,26	⊕	-0,94	-3,2	-12,35			
												150	0,05	0,62	⊕	-1,95	-10,47			
												200	0,54	1,6	1,47	⊕	-7,54			
.300 WBY		DRYX 10,7 g/165 gr # 20174632	0,333	3410	3100	2811	2540	4261	3521	2895	2363	50	⊕	0,78	0,65	-0,47	-6,14	0,76	3,17	7,45
												100	-0,39	⊕	-0,52	-2,03	-8,47			
												150	-0,22	0,34	⊕	-1,34	-7,44			
												200	0,12	1,01	1,01	⊕	-5,43			
.300 WBY		DRYX 11,7 g/180 gr # 20174622	0,354	3250	2968	2704	2454	4223	3522	2922	2408	50	⊕	0,7	0,41	-0,96	-7,39	0,76	3,15	7,41
												100	-0,35	⊕	-0,64	-2,36	-9,48			
												150	-0,14	0,42	⊕	-1,51	-8,21			
												200	0,24	1,18	1,13	⊕	-5,95			
.30-378 WBY		DRYX 10,7 g/165 gr # 20174652	0,333	3410	3100	2811	2540	4261	3521	2895	2363	50	⊕	0,78	0,65	-0,47	-6,14	0,76	3,17	7,45
												100	-0,39	⊕	-0,52	-2,03	-8,47			
												150	-0,22	0,34	⊕	-1,34	-7,44			
												200	0,12	1,01	1,01	⊕	-5,43			
.30-378 WBY		DRYX 11,7 g/180 gr # 20174642	0,354	3300	3015	2748	2496	4354	3634	3018	2490	50	⊕	0,73	0,5	-0,78	-6,91	0,74	3,09	7,26
												100	-0,36	⊕	-0,59	-2,23	-9,09			
												150	-0,17	0,4	⊕	-1,44	-7,9			
												200	0,2	1,12	1,08	⊕	-5,74			
.340 WBY		DRYX 14,9 g/230 gr # 20186182	0,37	3000	2745	2504	2275	4598	3849	3202	2644	50	⊕	0,55	-0,06	-1,94	-9,98	0,8	3,35	7,87
												100	-0,27	⊕	-0,88	-3,03	-11,62			
												150	0,02	0,59	⊕	-1,85	-9,86			
												200	0,48	1,51	1,39	⊕	-7,08			

## ORYX

To ensure perfect mushrooming at all impact velocities, the ORYX has a thin forward jacket with internal splitting zones. The bonding and the thicker rear jacket wall ensure a high residual weight after impact (well over 90%) and excellent penetration.



# NORMA DEFINES PRECISION WITH THEIR PREMIER BULLET LINE UP



## ORYX

Norma's flagship, the bonded Oryx sets the standard for premium big game bullets. A carefully engineered jacket, combined with a bonded core, yields a bullet that will not fragment even if heavy bone is hit, but will still fully expand to a large diameter when only soft tissue is encountered. Stringent jacket tolerances are

the key to fine accuracy. The construction of the Oryx bullet allows a relatively thin jacket toward the front, tapering to a thicker, more robust jacket in the rear. Stringent demands of the raw materials, measurement and weight combined with the highly precise manufacturing process, ensures superior accuracy.



## KALAHARI

A plated copper, lead-free bullet, the Kalahari is a premium bullet for the hunter needing a combination of pinpoint accuracy, high velocity, and decisive terminal performance. The bullet is designed to shed the forward section, creating massive internal damage, while a long shank remains for deep, bone crushing penetration. The unique design and relatively light bullet weights make

the Kalahari extremely flat shooting in their respective calibers, ensuring maximum point blank range. The proprietary plating reduces fouling to similar levels normally experienced with conventional jacketed bullets rather than the excessive amounts usually associated with pure copper bullets, and is easily cleaned without resorting to strong, erosive copper solvents.



## SOLIDS

Reliable feeding and straight line penetration are what you can expect from a Norma Solid. Made from a proprietary brass alloy, and engineered to stop the largest of game, Norma Solids will not to break up, turn or deviate. They will give straight line penetration through whatever they encounter. Like the African PH series of ammunition, this ammo is loaded under the highest of quality controls. Your hunt, and your safety, may depend on it!



# WHEN THE SHOT GOES OFF ... THE LONG SECOND

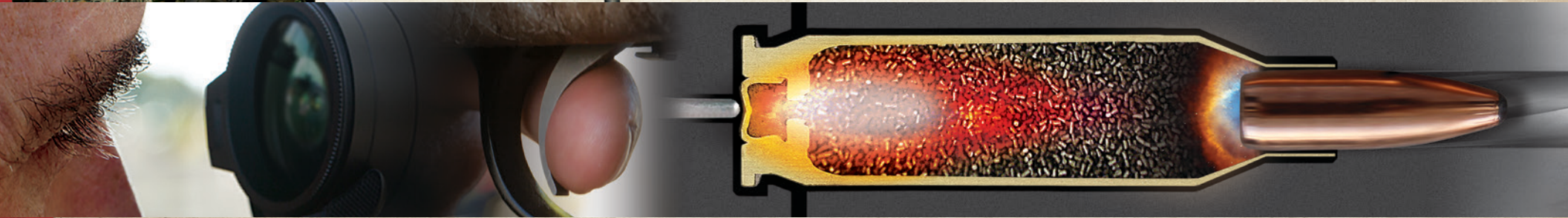


As a bullet leaves the barrel, it begins to drop at an accelerating rate of 32.16 feet per second per second. But under normal shooting conditions, few bullets stay aloft for an entire second.

Bullet speed doesn't defy gravity; it simply determines the reach of the bullet's arc over a given period.

If you dropped a bullet from your fingers at the same time a bullet was fired horizontally from a rifle the same distance above the earth, the two bullets would come to rest at very nearly the same time.

Many shooters have been led to believe that a bullet rises above the line of bore during



After the trigger is pulled, it takes around 0.005 seconds before the firing pin reaches the primer.

The pin makes a spherical imprint in the primer, and fires it ... the cartridge is pushed forward by approx. 0.1 mm at the same time.

Very hot gases and glowing particles splash through the flash hole of the case. The powder ignites.

Increasing pressure pushes the bullet forward. When reaching maximum pressure, the bullet's speed has reached approximately 300 m/s. From the firing of the primer it takes 0.0015-0.002 seconds until the bullet exits the muzzle.



its flight. It does not. Sight-line is not parallel to bore-line; the two converge. Sight-line dips below bore-line and a bullet's arc. Sight-line never meets bore-line again, as both are straight. But the bullet's downward trajectory is steeper than sight-line's angle, and the two paths cross a second time. Sighting in or zeroing

a rifle, you adjust the sight so that second intersection occurs at a distance you choose.

For the full article on Interior and Exterior Ballistics visit [www.norma.cc](http://www.norma.cc) and [www.norma-usa.com](http://www.norma-usa.com)



When the bullet leaves the muzzle, the hot gases surround and overtake the bullet, continuing the acceleration for a few centimetres.

Because the barrel is always angled slightly upwards, the bullet's flight starts about 3-5 cm below the line of sight.

If shooting distance is much shorter or longer than expected, the hunter may hold high or low, or else adjust the sights accordingly.

When shooting within usual distances the bullet hits the target at the exact aiming point.

# AFRICAN PH

# NORMA SOLIDS







Norma has teamed up with Woodleigh bullets to offer the finest dangerous game ammunition available. Tried and tested steel-jacketed solids and bonded-core softpoints are coupled with high quality Norma brass and powder, and loaded under the most rigorous inspection standards in the industry.

Nickel plated cases are used to ensure the most reliable feeding and ejection from rifles whose metalwork is too hot to touch or is full of the

inevitable African dust. The Woodleigh FMJ bullets use a steel jacket twice as thick as any other in the industry. Cases are all hand inspected both before and after loading.

We carefully select powder and primer in order to make variations in point of impact from batch to batch as small as possible. It is our goal that you can pick up a box anywhere in the world and have the same point of impact as with the box you used at home.



For the working guide, there are three considerations for ammunition: reliable feeding, reliable ignition and reliable straight-line penetration.

Many guides like to carry their rifles with an empty chamber and only actually load when danger threatens. The Norma Solids are designed to ensure reliable feeding in just about any make of rifle, including old, well-worn ones.

The law often forces a guide to allow a charging animal to get too close for













comfort before he may shoot for effect. Unless he's carrying a double rifle, he's limited to one shot. Being made from a proprietary brass alloy, Norma Solids are guaranteed not to break up, turn or deviate.

They will give straight-line penetration through whatever they encounter. Like the PH series of ammunition, these rounds are loaded under higher than normal standards of quality control to ensure absolute reliability.










*Professional Hunter*

# AFRICAN PH

	PRODUCT NAME BULLET WEIGHT g/gr PRODUCT NUMBER	BC SD	VELOCITY FEET PER SECOND					ENERGY FOOT POUNDS					TRAJECTORY, INCHES					MOMENTUM, LB - F/S					
			V <sub>0</sub>	V <sub>50</sub>	V <sub>100</sub>	V <sub>150</sub>	V <sub>200</sub>	E <sub>0</sub>	E <sub>50</sub>	E <sub>100</sub>	E <sub>150</sub>	E <sub>200</sub>	0	50	100	150	200	0	50	100	150	200	
375 HOLLAND & HOLLAND MAGNUM		<b>SOFT NOSE</b> 22,7 g / 350 gr	0,321	2300	2179	2062	1949	1840	4112	3692	3306	2954	2633	-1,6	0,1	⊕	-2,2	-6,6	115	109	103	98	92
	# 20195252	0,356																					
		<b>FULL METAL JACKET</b> 22,7 g / 350 gr	0,307	2300	2174	2052	1934	1821	4112	3674	3273	2908	2578	-1,6	0,1	⊕	-2,2	-6,7	115	109	103	97	91
	# 20195262	0,356																					
375 FLANGED MAGNUM NITRO EXPRESS		<b>SOFT NOSE</b> 19,4 g / 300 gr	0,276	2400	2249	2103	1963	1829	3838	3370	2947	2568	2228	-1,6	0,1	⊕	-2,1	-6,4	103	96	90	84	78
	# 20195222	0,305																					
		<b>FULL METAL JACKET</b> 19,4 g / 300 gr	0,276	2400	2249	2103	1963	1829	3838	3370	2947	2568	2228	-1,6	0,1	⊕	-2,1	-6,4	103	96	90	84	78
	# 20195232	0,305																					
416 REMINGTON MAGNUM		<b>SOFT NOSE</b> 29,2 g / 450 gr	0,338	2150	2040	1933	1830	1731	4620	4158	3735	3347	2996	-1,6	0,3	⊕	-2,6	-7,7	138	131	124	118	111
	# 20110722	0,371																					
		<b>FULL METAL JACKET</b> 29,2 g / 450 gr	0,325	2150	2035	1925	1818	1716	4620	4141	3702	3303	2942	-1,6	0,3	⊕	-2,6	-7,8	138	131	124	117	110
	# 20110732	0,371																					
416 RIGBY		<b>SOFT NOSE</b> 29,2 g / 450 gr	0,338	2150	2040	1933	1830	1731	4620	4158	3735	3347	2996	-1,6	0,3	⊕	-2,6	-7,7	138	131	124	118	111
	# 20110702	0,371																					
		<b>FULL METAL JACKET</b> 29,2 g / 450 gr	0,325	2150	2035	1925	1818	1716	4620	4141	3702	3303	2942	-1,6	0,3	⊕	-2,6	-7,8	138	131	124	117	110
	# 20110712	0,371																					
500/416 NITRO EXPRESS		<b>SOFT NOSE</b> 26,6 g / 410 gr	0,307	2325	2191	2062	1937	1817	4922	4373	3872	3417	3007	-1,6	0,2	⊕	-2,2	-6,7	136	128	121	114	106
	# 20110532	0,338																					
		<b>FULL METAL JACKET</b> 26,6 g / 410 gr	0,307	2325	2191	2062	1937	1817	4922	4373	3872	3417	3007	-1,6	0,2	⊕	-2,2	-6,7	136	128	121	114	106
	# 20110522	0,338																					
404 RIMLESS NITRO EXPRESS JEFFERY		<b>SOFT NOSE</b> 29,2 g / 450 gr	0,365	2150	2048	1949	1853	1760	4620	4191	3795	3430	3096	-1,6	0,2	⊕	-2,5	-7,6	138	132	125	119	113
	# 20110302	0,359																					
		<b>FULL METAL JACKET</b> 29,2 g / 450 gr	0,360	2150	2046	1946	1849	1755	4620	4185	3784	3416	3078	-1,6	0,2	⊕	-2,5	-7,6	138	132	125	119	113
	# 20110312	0,359																					

# AFRICAN PH

	PRODUCT NAME BULLET WEIGHT g/gr PRODUCT NUMBER	BC SD	VELOCITY FEET PER SECOND					ENERGY FOOT POUNDS					TRAJECTORY, INCHES					MOMENTUM, LB - F/S					
			V <sub>0</sub>	V <sub>50</sub>	V <sub>100</sub>	V <sub>150</sub>	V <sub>200</sub>	E <sub>0</sub>	E <sub>50</sub>	E <sub>100</sub>	E <sub>150</sub>	E <sub>200</sub>	0	50	100	150	200	0	50	100	150	200	
450 RIGBY RIMLESS		<b>SOFT NOSE</b> 35,6 g / 550 gr	0,340	2100	1992	1887	1787	1690	5387	4847	4352	3900	3491	-1,6	0,3	⊕	-2,7	-8,2	165	157	148	140	133
	# 20111052	0,375																					
		<b>FULL METAL JACKET</b> 35,6 g / 550 gr	0,326	2100	1987	1879	1774	1674	5387	4825	4311	3845	3425	-1,6	0,3	⊕	-2,8	-8,3	165	156	148	139	132
	# 20111062	0,375																					
458 LOTT		<b>SOFT NOSE</b> 35,6 g / 550 gr	0,330	2100	1982	1869	1760	1656	5387	4801	4268	3784	3349	-1,6	0,4	⊕	-2,9	-8,5	165	156	147	138	130
	# 20111132	0,375																					
		<b>FULL METAL JACKET</b> 35,6 g / 550 gr	0,330	2100	1982	1869	1760	1656	5387	4801	4268	3784	3349	-1,6	0,4	⊕	-2,9	-8,5	165	156	147	138	130
	# 20111142	0,375																					
470 NITRO EXPRESS		<b>SOFT NOSE</b> 32,4 g / 500 gr	0,374	2100	2002	1906	1814	1725	4897	4449	4035	3654	3304	-1,6	0,3	⊕	-2,7	-8,0	150	143	136	130	123
	# 20112052	0,318																					
		<b>FULL METAL JACKET</b> 32,4 g / 500 gr	0,370	2100	2001	1904	1811	1721	4897	4445	4027	3642	3290	-1,6	0,3	⊕	-2,7	-8,0	150	143	136	129	123
	# 20112062	0,318																					
500 JEFFERY		<b>SOFT NOSE</b> 36,9 g / 570 gr	0,368	2200	2097	1997	1901	1807	6127	5568	5050	4573	4134	-1,6	0,2	⊕	-2,4	-7,1	179	171	163	155	147
	# 20113162	0,313																					
		<b>FULL METAL JACKET</b> 36,9 g / 570 gr	0,350	2200	2092	1987	1886	1788	6127	5541	4999	4502	4048	-1,6	0,2	⊕	-2,4	-7,2	179	170	162	154	146
	# 20113152	0,313																					
500 NITRO EXPRESS 3"		<b>SOFT NOSE</b> 36,9 g / 570 gr	0,368	2100	2000	1903	1809	1719	5583	5064	4585	4145	3742	-1,6	0,3	⊕	-2,7	-8,0	171	163	155	147	140
	# 20113012	0,313																					
		<b>FULL METAL JACKET</b> 36,9 g / 570 gr	0,350	2100	1995	1893	1795	1701	5583	5039	4538	4081	3664	-1,6	0,3	⊕	-2,7	-8,1	171	162	154	146	139
	# 20113022	0,313																					
505 MAGNUM GIBBS		<b>PROTECTED POINT</b> 39,0 g / 600 gr	0,360	2100	1998	1899	1803	1711	5877	5319	4805	4334	3904	-1,6	0,3	⊕	-2,7	-8,1	180	171	163	155	147
	# 20113102	0,336																					
		<b>FULL METAL JACKET</b> 39,0 g / 600 gr	0,360	2100	1998	1899	1803	1711	5877	5319	4805	4334	3904	-1,6	0,3	⊕	-2,7	-8,1	180	171	163	155	147
	# 20113112	0,336																					

# NORMA SOLIDS

	PRODUCT NAME BULLET WEIGHT g/gr PRODUCT NUMBER	BC SD	VELOCITY FEET PER SECOND					ENERGY FOOT POUNDS					TRAJECTORY, INCHES					MOMENTUM, LB - F/S				
			V <sub>0</sub>	V <sub>50</sub>	V <sub>100</sub>	V <sub>150</sub>	V <sub>200</sub>	E <sub>0</sub>	E <sub>50</sub>	E <sub>100</sub>	E <sub>150</sub>	E <sub>200</sub>	0	50	100	150	200	0	50	100	150	200
9,3X62	 SOLID 17,8g/275gr 0,236 # 20193552 0,293		2450	2272	2101	1938	1783	3666	3153	2696	2294	1942	-1,6	1,0	⊕	-2,0	-6,4	96	89	83	76	70
375 H&H MAG.	 SOLID 19,4g/300gr 0,229 # 20195352 0,305		2550	2362	2183	2011	1847	4333	3718	3174	2694	2274	-1,6	0,0	⊕	-1,8	-5,8	109	101	94	86	79
416 RIGBY	 SOLID 25,9g/400gr 0,247 # 20110762 0,330		2375	2208	2047	1893	1748	5011	4330	3728	3185	2713	-1,6	0,1	⊕	-2,2	-6,8	136	126	117	108	100
416 TAYLOR	 SOLID 24,3g/375gr 0,245 # 20110542 0,310		2350	2182	2021	1868	1722	4600	3966	3403	2906	2470	-1,6	0,1	⊕	-2,3	-7,0	126	117	108	100	92
416 REM. MAG.	 SOLID 25,9g/400gr 0,247 # 20110752 0,330		2400	2232	2070	1915	1768	5117	4424	3807	3259	2778	-1,6	0,1	⊕	-2,1	-6,6	137	128	118	109	101
404 RIMLESS NITRO EXPRESS JEFFERY	 SOLID 25,9g/400gr 0,247 # 20110352 0,319		2325	2160	2001	1850	1706	4802	4143	3557	3039	2586	-1,6	0,1	⊕	-2,3	-7,2	133	123	114	106	98
450 RIGBY RIMLESS	 SOLID 32,4g/500gr 0,269 # 20111042 0,340		2500	2342	2179	2042	1901	6941	6089	5320	4629	4012	-1,6	0,0	⊕	-1,8	-5,7	179	167	156	146	136
458 WIN. MAG.	 SOLID 32,4g/500gr 0,269 # 20111182 0,340		2100	1956	1819	1689	1566	4897	4251	3675	3167	2724	-1,6	0,3	⊕	-3,0	-9,0	150	140	130	121	112
458 LOTT	 SOLID 32,4g/500gr 0,269 # 20111172 0,340		2300	2149	2003	1864	1731	5875	5127	4457	3858	3328	-1,6	0,1	⊕	-2,3	-7,1	164	154	143	133	124
500 JEFFERY	 SOLID 35,0g/540gr 0,239 # 20113182 0,300		2400	2226	2059	1900	1749	6908	5943	5086	4331	3670	-1,6	0,1	⊕	-2,1	-6,7	185	172	159	147	135
505 MAGNUM GIBBS	 SOLID 35,0g/540gr 0,242 # 20113122 0,302		2300	2132	1972	1819	1674	6345	5453	4662	3967	3362	-1,6	0,2	⊕	-2,4	-7,4	177	165	152	140	129

# You Got One Shot... One Bullet...

RELIABLE ACCURACY & ENERGY for MAXIMUM PERFORMANCE.



When only a bullet stands between your life and death... You better make it count!

Norma Precision Ammunition delivers the right combination of accuracy and energy to stop a charging bull at full speed. NORMA's established African PH & Solids offer the finest

dangerous game ammunition available.

Each round is meticulously loaded under the most rigorous inspection standards in the industry.

NORMA's full line of African PH & Solids calibers range from 9.3x62 to the .505 Magnum Gibbs.



**norma** USA<sup>®</sup>

## THE PROFESSIONAL'S CHOICE FOR PRECISION AMMUNITION



### LONG RANGE SHOOTING



#### **300 NORMA MAGNUM**

The 300 Norma Magnum was designed so that the same set of headspace gauges and magazines could be used for rifles chambering the .300 NM as the .338 NM. This .30 caliber cartridge delivers long-range precision with excellent barrel life when compared to other cartridges of similar velocity.



#### **338 NORMA MAGNUM**

Jimmy Sloan was given a clean slate to design the 'ideal' .338 cartridge. Loaded with a 300 grain Sierra Match King bullet, the 338 Norma ballistically matches the competition, but with drastically improved barrel life.



#### **338 LAPUA MAGNUM**

Developed in the early 1980s as a military sniper cartridge, this 338 is developed on a modernized and strengthened 416 Rigby Case. It has achieved considerable acclaim in sniping circles, and has become a firm favorite with precision shooters in military, law enforcement, and civilian competition circles around the world. Those looking for a flat shooting and hard hitting long-range cartridge will find that the 338 Lapua delivers.

## COMPETITIVE SHOOTING



### 6XC

Coated Hollow Point  
 Ballistic Coefficient 0,517  
 Bullet weight 105 Grains  
 Velocity feet per second 3018

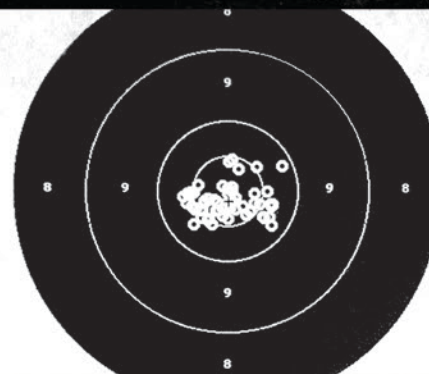


### 6MM NORMA BR

Coated Hollow Point  
 Ballistic Coefficient 0,517  
 Bullet weight 105 Grains  
 Velocity feet per second 2789



## NORMA 6XC



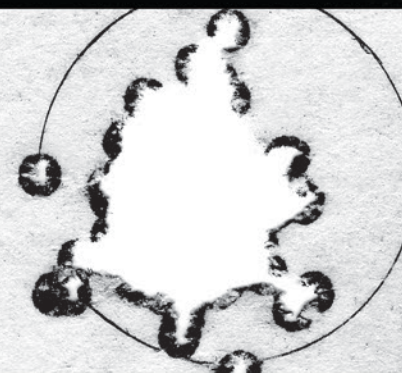
51: X, 4  
 52: X, 5  
 53: X, 5  
 54: X, 5  
 55: X, 9  
 56: X, 9  
 57: X, 6  
 58: X, 4  
 59: X, 5  
 60: X, 8

SER = 600  
 TOT = 600

X, 8

SKOTT NR: 60

>> 600 POINTS WITH THE 6XC DIAMOND LINE



### MAXIMUM ACCURACY, LESS BARREL WEAR.

Norma 6XC and 6mm Norma BR cartridges are loaded with match quality bullets coated with molybdenum disulfide and wax.

The coating reduces friction and barrel wear, resulting in uniform velocity, less pressure and maximum accuracy.

# NORMA USA MATCH & TAC

**NORMA-USA's MATCH & TAC** Ammunition is designed and engineered specifically for the competitive shooter. Built with the finest components and powder combinations, you'll be sure to shoot with unmatched accuracy on and off the range. Norma Precision's Tac and Match, excellent choices for both practice and competition. TAC products engineered for reliable feeding in semi-automatics.

## NORMA-USA PRECISION QUALITY

- : High-performance bullet & powder combinations
- : Optimum powder charges for maximum ballistic performance
- : Cases are precision manufactured for superior accuracy
- : Precision inspected to insure proper bullet seating & primer pocket alignment

FOR COMPLETE LINE UP & BALLISTICS INFORMATION,  
VISIT US ONLINE [WWW.NORMA-USA.COM](http://WWW.NORMA-USA.COM)

## TAC-223 // TAC-308 :

Loaded with full metal jacket boat tails for accurate, flat shooting trajectory. The professionals choice for both practice and competition.

## MATCH-223 // MATCH-308 :

Loaded with Sierra's Match King bullets for match-grade performance. This hollow point boat tail sets the bar for extremely accurate shooting and ballistic performance at long ranges—exacting tolerances assure record-breaking accuracy you can depend on, box after box.

## TAC-22 .22 Long Rifle Rimfire

Reasonably priced, high quality ammunition, you'll be sure to shoot unmatched accuracy on and off the range.






















## NEW! NORMA-USA's MATCH-22

Ammunition is designed and engineered specifically for competitive shooting and target practice where every point counts.







# BALLISTIC DATA – MATCH

	Product name Bullet type Product number	Ball. coefficient	Bullet weight		Barrel length, inches	Velocity feet per second V <sub>0</sub>	Height of trajectory above line of sight if sighted in at For sights 1.6 inches above bore					Wind drift in inches for a 10 m.p.h cross wind			
			grains	gram			100	200	300	400	500	600 yds	300	600 yds	
223 REM	 	<b>SIERRA</b> Hollow Point # 10157502	0,372	77	5,0	24	2790	153	179	⊕	-433	-1188	-2358	300	1421
	 	<b>FMJ</b> Full Metal Jacket # 20157442	0,209	55	3,6	24	3250	4,06	5,18	⊕	-14,19	-41,54	-88,15	12,48	65,69
6MM NORMA BR	 	<b>DIAMOND LINE BERGER</b> Coated Hollow Point # 10160162	0,517	105	6,8	26	2789	4,2	5,0	⊕	-11,4	-30,2	-57,5	5,5	24,3
6XC	 	<b>DIAMOND LINE BERGER</b> Coated Hollow Point # 10160182	0,517	105	6,8	26	3018	3,5	4,2	⊕	-9,8	-26,1	-49,9	5,4	23,8
6,5-284 NORMA	 	<b>GOLDEN TARGET</b> Hollow Point # 10166092	0,548	130	8,4	26	3070	3,3	4,0	⊕	-9,3	-24,6	-46,8	4,9	21,6
	 	<b>FMJ</b> Full Metal Jacket # 20174562	0,438	150	9,7	29	2723	4,7	5,6	⊕	-13,2	-35,5	-68,6	7,5	34,0
308 WIN	 	<b>SIERRA</b> Hollow Point # 10174542	0,462	168	10,9	24	2720	4,69	5,52	⊕	-12,96	-34,67	-66,75	6,36	28,74
	 	<b>BERGER</b> Hollow Point # 20174602	0,743	230	14,9	26	2985	3,3	4,0	⊕	-9,1	-23,8	-44,7	3,7	15,8
338 NORMA MAG	 	<b>SIERRA</b> Hollow Point # 20185272	0,768	300	19,4	26	2660	4,5	5,2	⊕	-11,6	-30,4	-56,7	4,2	18,0
338 LAPUA MAG	 	<b>SIERRA</b> Hollow Point # 10185192	0,587	250	16,2	27	2821	4,0	4,8	⊕	-11,0	-29,0	-54,9	5,2	22,6
	 	<b>SIERRA</b> Hollow Point # 10185212	0,762	300	19,4	27	2660	4,5	5,2	⊕	-11,6	-30,4	-56,7	4,2	18,0

# BALLISTIC DATA – SHORT RANGE

	Product name Bullet type Product number	Ball. coefficient	Bullet weight		Velocity, feet per second in yards				Zero range, yards	Height of trajectory above line of sight					Wind drift at 100 yds	
			grains	gram	V <sub>0</sub>	V <sub>25</sub>	V <sub>50</sub>	V <sub>100</sub>		25	50	75	100	150 yards		
22 LONG RIFLE	 	<b>MATCH 22 # 2318980</b> <b>TAC 22 # 2318716</b> Lead, Round Nose	0,15	40	2,6	1066	1025	989	930	50	0,2	⊕	-2,4	-7,3	-24,5	3,8

# “NORMA’S BRASS IS NOT JUST GOOD, IT’S EXCEPTIONAL.”

~ QUOTE FROM A US AMMUNITION MANUFACTURER

Norma products are known worldwide for high quality. Cartridge cases are an important factor in this reputation. Superior quality ensures a long life and many reloads. Norma cases are made of the best possible raw materials with the narrowest tolerances, and they deliver accuracy round after round.

The case neck is annealed to become softer. This prevents gas leaks and enables the case to hold the bullet firmly for at least 10 years without cracking as a result of aging material.

Further down on the case body, the hardness increases to avoid unnecessary stretching. If it is too hard, it would bring the risk of cracks.

Furthest down, around the primer pocket, the brass should be firm. Here, the hardness is nearly twice that of around the neck. The structure of the material reveals the hardness. During processing the large, soft grains are broken down into smaller ones, which makes for a harder material. At the annealing stations, small grains become bigger and the hardness decreases.



The Norma control stations always verify the correct weight, volume and exact dimensions to achieve the highest possible quality.

Competitive shooting and reliable hunting ammunition demand the tightest tolerances.

To manufacture the world's best cases, it is essential that all stages be managed carefully, as for example punching the flash-hole dead centre in the primer pocket.



# NORMA'S BRASS CASE COMPONENTS

CALIBER	PRODUCT#	CALIBER	PRODUCT#	CALIBER	PRODUCT#	CALIBER	PRODUCT#	CALIBER	PRODUCT#	CALIBER	PRODUCT#
<b>NORMA BRASS CASES</b>		25-06	# 20264115	7x64	# 20270125	300 WSM	# 20276765	375 Flanged Mag.	# 20295155	<b>NORMA CASES FOR THE WEATHERBY MAGNUM</b>	
		6,5-284	# 20265285	7x65R	# 20270185	7,65 Arg.	# 20277015	404 Rimless NE	# 20210435		
17 Rem.	# 20243015	6,5 Jap.	# 20265315	7mm Rem. Mag.	# 20270215	7,7 Jap.	# 20277215	416 Rigby	# 20210605	224 Wby. Mag.	# 20257405
204 Ruger	# 20255105	6,5 Carcano	# 20265355	7mm RUM	# 20270225	8x57JS	# 20280015	416 Taylor	# 20210675	240 Wby. Mag.	# 20260205
5,6x52R	# 20256045	6,5x54 MS	# 20265455	7mm Blaser	# 20270455	8x57 JRS	# 20280145	416 Rem. Mag.	# 20210695	257 Wby. Mag.	# 20265025
220 Swift	# 20257015	6,5 Creedmoor	# 20265135	7mm-08 Rem.	# 20270225	8x68 S	# 20280255	500/416 NE	# 20210705	270 Wby. Mag.	# 20269125
221 Rem. Fireball	# 20256025	6,5 Grendel	# 20265115	280 Rem.	# 20270505	338 Win. Mag.	# 20285045	45 Cylindrical	# 20211235	7 mm Wby. Mag.	# 20270325
300 AAC Blackout	# 20275065	6,5x55	# 20265515	7,5x55 Swiss	# 20275115	338 Lapua Mag.	# 10285075	45-120	# 20211255	300 Wby. Mag.	# 20276605
222 Rem.	# 20257115	260 Rem.	# 20266025	300 Norma Mag.	# 20275615	338 Norma Mag.	# 10285205	450 Rigby	# 20211255	30-378 Wby. Mag.	# 20276775
223 Rem.	# 20257215	264 Win. Mag.	# 20268025	300 SAUM	# 20276115	338 Blaser Mag.	# 20285255	458 Win.	# 20211555	338-06 Wby. Mag.	# 20285115
22-250 Rem.	# 20257315	.26 Nosler	# 20266035	300 RUM	# 20276865	358 Norma Mag.	# 20290015	458 Lott	# 20211575	338-378 Wby. Mag.	# 20285165
22 PPC USA	# 10257105	270 Win.	# 20269015	308 Win.	# 20276235	35 Whelen	# 20290025	470 NE	# 20211635	340 Wby. Mag.	# 20286025
243 Win.	# 20260015	270 WSM	# 20269075	308 Norma Mag.	# 20276375	9,3x57	# 20293015	500 Jeffery	# 20213155	375 Wby. Mag.	# 20295135
6 PPC USA	# 10260105	7x57	# 20270015	30-06	# 20276405	9,3x62	# 20293115	500 NE	# 20213005	378 Wby. Mag.	# 20295125
6mm Norma BR	# 10260155	7x57R	# 20270045	300 H&H	# 20276535	9,3x74R	# 20293215	505 Magnum	# 20213105	416 Wby. Mag.	# 20210655
6mm XC	# 10260185	7x61 Super	# 20270115	300 Win. Mag.	# 20276665	375 H&H Mag.	# 20295015			460 Wby. Mag.	# 20211605

NORMA UNPRIMED CASES ARE PACKED IN BOXES OF 25 EACH.



The fact that many well-known ammunition manufacturers all over the world load their own ammunition using Norma-made cases is only one of many pointers to superior quality.

The choice of raw materials and the numerous checks of weight and dimensions during manufacture guarantee high quality.

Case inspection for quality.

# NORMA POWDERS

The shooter using Norma powder can safely trust that loading data, pressure, velocity and accuracy are maintained at the same high level from lot to lot. A flexible range of powders offers the handloader many opportunities to load the best possible cartridges in any given caliber.

## NORMA 200 POWDER

Our fastest-burning propellant is suitable for smaller cartridges such as the 222 Remington and 22 Hornet.

It can also be used to shoot lightweight, low velocity bullets in medium calibres such as the 308 Win.

500 g/canister.  
Product # 20932005

## NORMA 201 POWDER

This is very suitable for calibres with small case volume in relation to the bore size, such as 9,3x57 and 45-70. It's also the right choice for shooting lightweight bullets in medium-sized cases such as the 30-06.

500 g/canister.  
Product # 20932015

## NORMA 202 POWDER

Specially developed to provide maximum performance in the 308 Winchester, 202 is a very useful powder for cases with medium capacity compared to calibre, such as the 8x57, 9,3x62 and 9,3x74R.

500 g/canister.  
Product # 20932025

## NORMA 203B POWDER

Specifications for 203B differ slightly from the previous 203 powder.

It is flexible, and is useful from 22-250 to 358 Norma Mag. It is very suitable for 6 mm Norma BR and 308 Winchester loaded with heavier bullets.

500 g/canister.  
Product # 20932035

## NORMA 204 POWDER

A slow-burning propellant, 204 provides good performance and quite good accuracy in calibres such as 6,5x55 and 30-06.

500 g/canister.  
Product # 20932045

## NORMA MRP POWDER

A very flexible magnum powder, MRP is suitable for calibres with relatively large case volume in relation to the calibre.

It has been well-known for many years as a high performance powder in all magnum calibres.

500 g/canister.  
Product # 20932155

## NORMA 217 POWDER

This is a very flexible magnum powder, suitable where there is relatively large case volume in relation to the bore size. It has been well-known for many years as a high performance powder in all magnum calibres.

500 g/canister.  
Product # 20932175

## NORMA URP POWDER

A high-energy, mid-range propellant, URP is an excellent choice for medium-sized cartridges such as 7x64 and 30-06.

500 g/canister.  
Product # 20932195

## NORMA MATCH POWDER 1211

500 g/canister. Product # 10932115

## NORMA MATCH POWDER 1214

500 g/canister. Product # 10932145

Reloading data for sports and hunting cartridges are available at [www.norma.cc](http://www.norma.cc) or in Norma's Reloading Manual. Please note that for the match powders 1211 and 1214 data may be found only on the cans.



# THE NORMA RELOADING MANUAL

## Expanded Edition

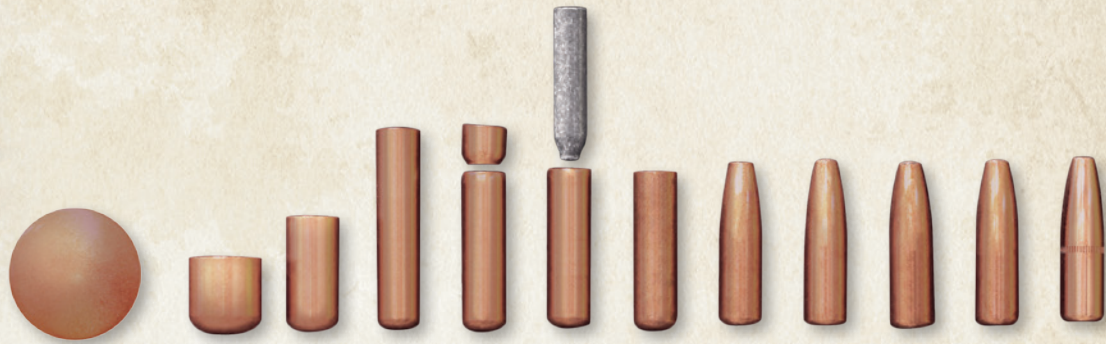


The *Norma Reloading Manual* is a must for the keen handloader. It is full of history, good advice, and loads using Norma bullets and powders. It ought to be on every loading bench.

Every hunter and shooter can always learn something new in the steady search for the best possible load for his particular needs.



UNMATCHED PERFORMANCE IS FOUND IN OVER ONE HUNDRED YEARS OF DEDICATION AND COMMITMENT TO EXCELLENCE.



EXCELLENCE IS FOUND IN A THOUSAND DETAILS.



FOR CURRENT DATA & SPECIFICATIONS RELATED TO AMMUNITION, BALLISTICS AND RELOADING COMPONENTS ~ PLEASE VISIT US ONLINE AT [WWW.NORMA.CC](http://WWW.NORMA.CC) & [WWW.NORMA-USA.COM](http://WWW.NORMA-USA.COM)

# ONLINE RESOURCES

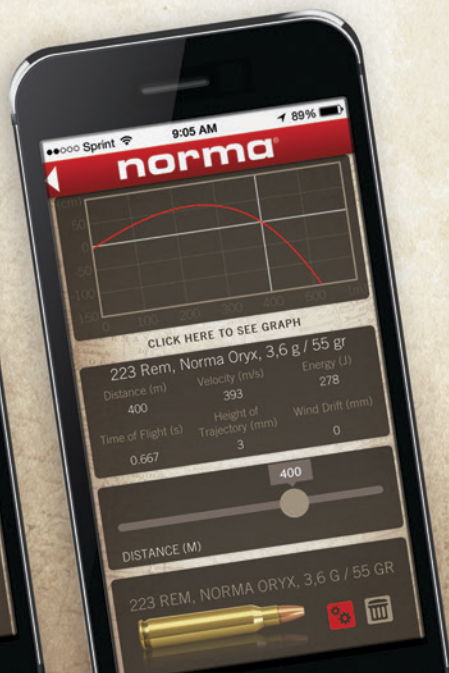
## NORMA-USA.COM & NORMA.CC

- FULL PRODUCT LINE UP
- PRODUCT INFO
- DEALER LOCATIONS
- HUNTING & SHOOTING INFO
- PRODUCT VIDEOS
- BALLISTICS CALCULATOR
- HISTORY
- CARTRIDGE OF THE MONTH
- LATEST NEWS FROM NORMA
- AND MORE!



**DOWNLOAD THE NORMA BALLISTICS APP FOR IPHONE AND ANDRIOD**

The Norma Ballistics application includes the Ballistic Calculator along with complete access to the Reloading Data and Norma's entire range of products in a searchable, mobile and interactive format. Empowering hunters and shooters to make the right choice of ammunition and calculate performance out in the woods or the shooting range.





**WE'VE GOT YOU COVERED!**  
FIND OUR FULL LINE OF PRECISION AMMUNITION  
WITH OUR NATIONWIDE PREMIER DEALERS  
VISIT OUR DEALER LOCATOR AT [NORMA-USA.COM](http://NORMA-USA.COM)

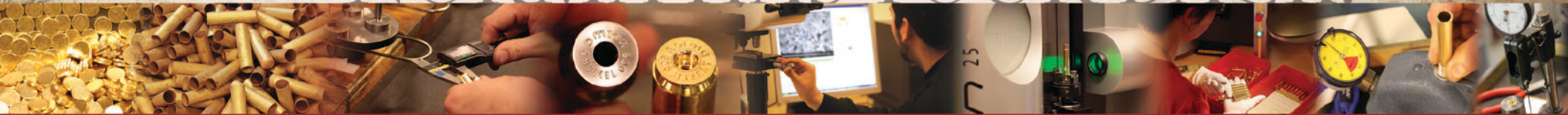


We strive to keep Norma's precision products readily available through our key team of premier retail stores and online dealers. Norma's ammunition and reloading products are available at over 300+ retail locations nationwide.  
[norma-usa.com/locate-dealers](http://norma-usa.com/locate-dealers)

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NORMA HAS YOUR BACK!



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