SHOT ALLOYS
INNOVATION

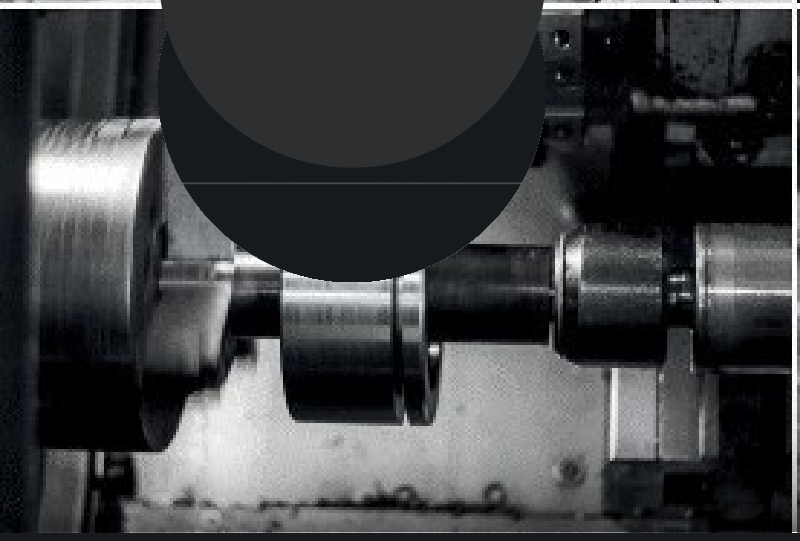
BUSINESS PRODUCT CATALOG

2025

www.shotalloys.com

SHOT ALLOYS

INNOVATION



ABOUT US

Our journey towards innovation began in 2010 when we embarked on the production of buckshot,lead wire, and lead billet using cutting-edge technology. Driven by a commitment to quality. With a sprawling manufacturing facility spanning 4000 square meters and employing over 100 dedicated individuals, Shot Alloy Innovation operates under stringent quality standards,

At Shot Alloy Innovation, sustainability is at the core of our ethos. We prioritize environmental responsibility by recycling lead-containing manufactured goods, thereby producing high-value end products while remaining environmentally friendly.

Recognizing the importance of timeliness, we leverage our robust technological infrastructure to deliver our customers' needs promptly and comprehensively. At Shot Alloy Innovation, we understand that time is of the essence, and we strive to exceed expectations with every endeavour.

CERTIFIED ISO 9001:2015 COMPANY

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BISMUTH SHOT

Bismuth is one of the gentlest pellet materials available, designed to minimize wear and tear on your equipment compared to conventional options such as iron and steel. At Shot Alloys Innovation, we craft our products using an ultra-high purification process, blending bismuth with 6% tin. This advanced method results in bismuth shot with exceptional density and ultra-fine grain sizes, delivering performance comparable to lead while being more compatible with your equipment and environmentally friendly.

Our latest production of bismuth pellets, alloyed with 6% tin, delivers enhanced strength, high density, and exceptional quality. These pellets are engineered to meet rigorous performance standards, offering excellent consistency and reliability in various applications. Tested for versatile use, they provide a durable and eco-friendly alternative, quickly gaining recognition for their superior performance in demanding environments.

Product Details

- Manufacture Based on B774 - 00 Standard
- 94 Bi Sn Composition; Density 9.58 – 9.67 g/cc
- Available Sizes:
  U.S. Size: # B, 1, 2, 3, 3.5, 4, 5, 6
  U.K Size: #AAA, 4, 6
- Uniformly and Perfectly Spherical
- Surface: Sand Blast Non-Plated, Nickel Plated, Zinc Plated
- Suitable for load of 12, 16, 20, 28, & .410 ga.

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BUCK SHOT

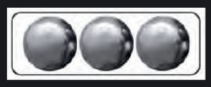

4.55 mm


5.00 mm


5.16 mm


6.20 mm

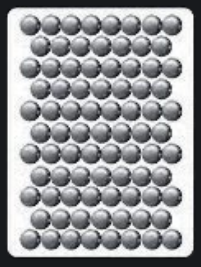

7.62 mm


8.00 mm


8.43 mm

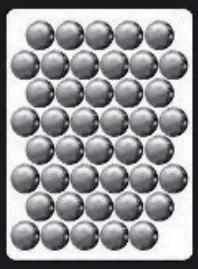

8.60 mm

LEAD SHOT


No. 10
1.75 mm


No. 9
2.00 mm


No. 8
2.25 mm


No. 7
2.50 mm


No. 6
2.75 mm


No. 5
3.00 mm


No. 4
3.25 mm

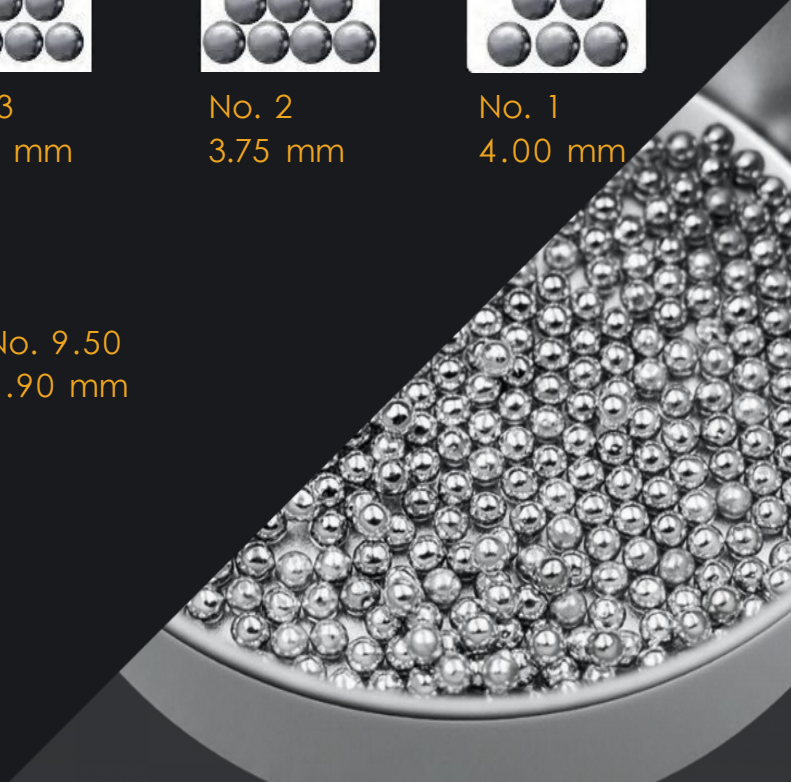

No. 3
3.50 mm


No. 2
3.75 mm


No. 1
4.00 mm


No. 7.50
2.40 mm


No. 9.50
1.90 mm



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LEAD BALLAST

Lead counterweights are utilized in various systems, with common applications including elevators, cranes, bridges, and amusement park rides. An iconic example showcasing the use of counterweights for stability is the Leaning Tower of Pisa, which is no longer gradually tilting towards the ground! Typically, lead counterweights are designed to ensure that their weight multiplied by the distance from the central support equals the load times its distance from the central support.

In certain systems, meeting this requirement may necessitate tight tolerances for the machined lead ballast. Shot Alloys Innovation boasts extensive experience in providing counterweights, including numerous repeat orders for custom-machined and power-coated lead counterweights for a Fortune 500 defense contractor.

Construction

Elevators use counterweights to balance the load of the elevator car and some portion of the rated capacity (typically 50%). This means that the elevator motor needs to lift only a fraction of the full load, thereby increasing ascending acceleration force and decreasing the descending force. Similar to the elevator car, the lead counterweights run on tracks to smooth out the ride for the passengers.

Crane Design

Crane operates as a mechanism to balance the load to be moved with a lead counterweight, ensuring stability and efficiency in lifting operations. Typically, the counterweight, positioned close to the tipping point, exceeds the weight of the load to be lifted. In some crane designs, hydraulic mechanisms are incorporated to adjust the position of the counterweight, optimizing load capacity and enhancing operational flexibility.

Moveable Bridges

Take important role in transportation, infrastructure, providing essential crossings over waterways for vehicles, pedestrians, and cargo. Among the various types of moveable bridges, the vertical-lift bridge stands out for its unique mechanism. In a vertical-lift bridge, a segment of the bridge's span is raised vertically, maintaining a parallel position to the ground below. This lifting action allows ships to pass underneath without obstruction.

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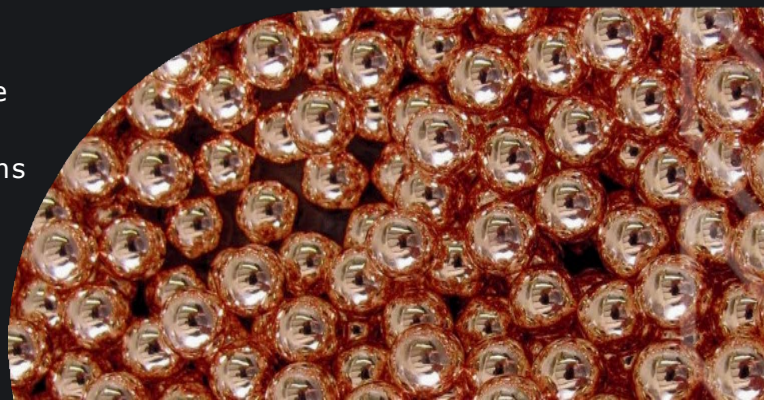
PLATING LEAD SHOTS

In applications requiring frangibility and a preference for a more brittle copper deposit, Shot Alloys Innovation offers a specialized solution. Through advanced engineering, we have developed a hardened copper deposit that ensures optimal disintegration upon terminal impact, enhancing safety and performance.

Our expertise extends to successful plating of "green" powdered metal and sintered frangible cores, providing versatility for various configurations within the ammunition industry. Additionally, we offer resin impregnation services tailored to specific application requirements, further enhancing the functionality and reliability of our products.

Advantages

- Enhanced durability for prolonged use
- Improved corrosion resistance
- Increased surface hardness for better performance
- Enhanced environmental compatibility
- Consistent flight trajectories for improved accuracy
- Reduced risk of lead contamination
- Customizable surface properties
- Cost-effective solution for long-term use
- Extended product lifespan
- Enhanced reliability in various applications



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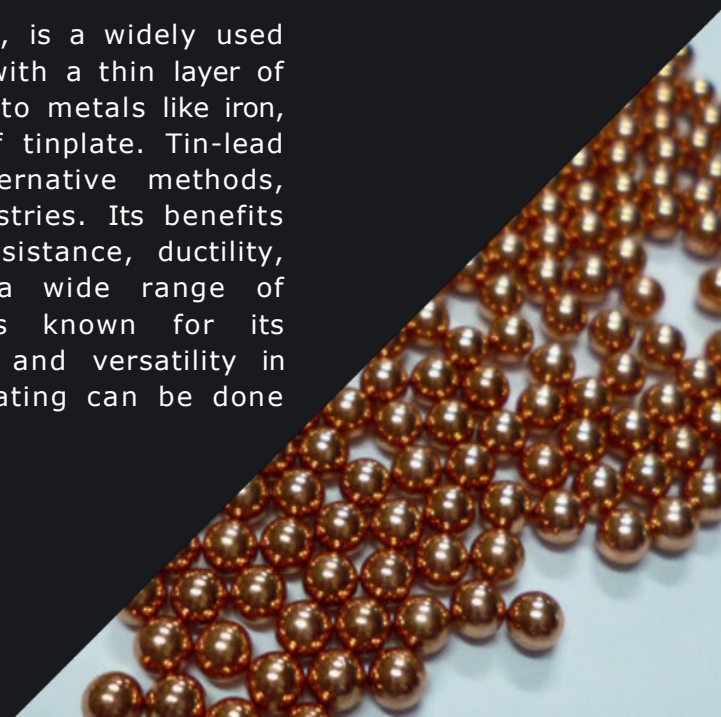
TIN LEAD PLATING

Elevate your product performance with our premium chrome and copper plating services. Our chrome plating offers unparalleled hardness and lubricity, effectively minimizing friction and wear, while resisting corrosion and abrasion in challenging environments. Our copper plating provides exceptional electrical conductivity and superior adhesion, making it the perfect choice for applications requiring conductivity or solder ability. Partner with Shot Alloys Innovation for top-tier plating solutions that enhance durability and optimize performance for your business needs.

Superior Choice for Industrial Coating

Tin-lead plating, also known as solder plating, is a widely used industrial process for coating metal objects with a thin layer of tin-lead alloy. This method, commonly applied to metals like iron, copper, and steel, results in the formation of tinplate. Tin-lead plating offers several advantages over alternative methods, making it a preferred choice in various industries. Its benefits include enhanced solder ability, corrosion resistance, ductility, cost-effectiveness, and compatibility with a wide range of substrates. Additionally, tin-lead plating is known for its established reliability, regulatory compliance, and versatility in meeting specific application requirements. Plating can be done with different materials as per client request.



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RAW MATERIAL

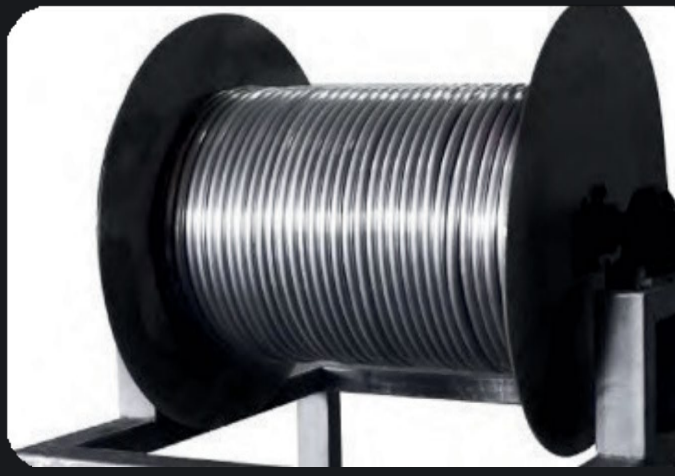
The lead extracted from scrap batteries undergoes recycling to serve as raw material at Shot Alloys Innovation. Within our recycling plant, batteries undergo a series of processes, resulting in the formation of pure lead or antimony lead ingots, available in sizes ranging from 30 kg to 300 kg, tailored to the specific demands of our customers. This is achieved through the meticulous melting of lead within the ingots, ensuring high-quality and customizable raw materials for our customers.

Lead Billet

Following the melting of the Lead Ingot, the molten lead is poured into a cylindrical mold measuring 9.2 cm in diameter and 13 cm in length, resulting in a shaped product weighing 9 kg.

Lead Wire

he lead wire is transformed into a wire with diameters ranging from 3 mm to 16 mm, as per the customer's preferences and production requirements, utilizing a press machine. These wires are then wound onto spools weighing 50 kg each, prepared and available for purchase.



SHOT ALLOYS
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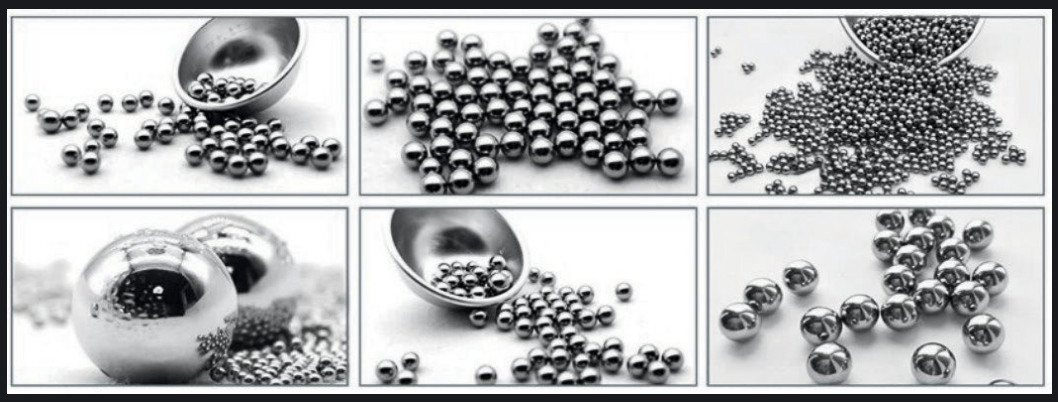
Carbon Steel Ball

STEEL SHOT

Stainless Steel Ball



Chrome Steel Ball

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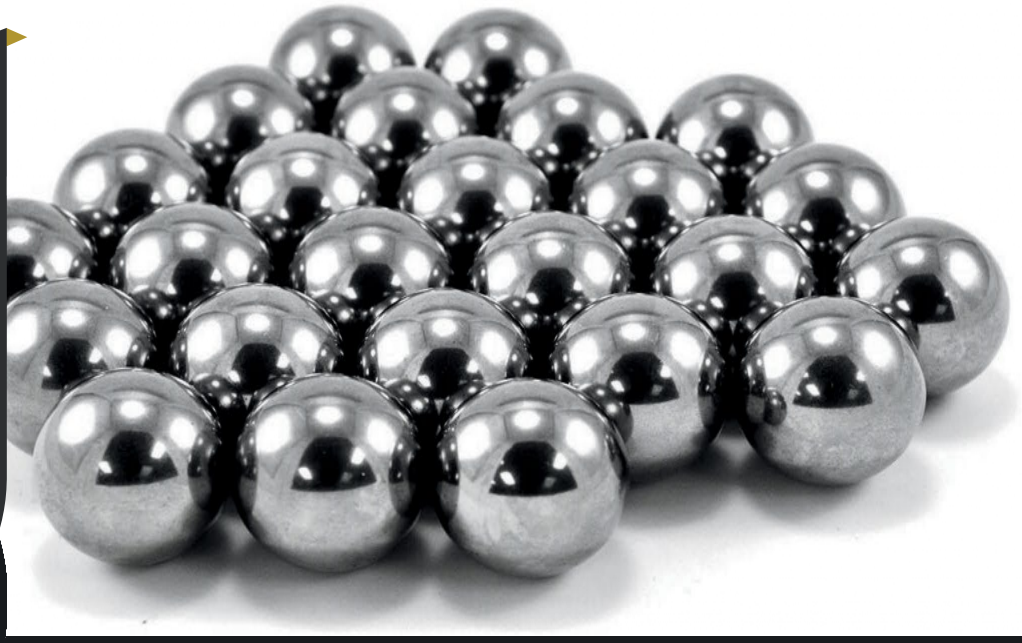

STEEL SHOT

Carbon Steel Ball (size)

(DIAMETER) inches	mm	(CRUSHING LOAD)kg	(CASE DEPTH) mm	(DIAMETER) inches	mm	(CRUSHING LOAD)kg	(CASE DEPTH) mm
3/32	2.381	–	0.50	13/32	10.319	3587	1.40
1/8	3.175	444	0.60	7/16	11.113	4093	1.70
5/32	3.969	660	0.60	15/32	11.906	4627	1.70
3/16	4.763	913	0.80	1/2	12.700	5187	1.80
7/32	5.556	1200	0.90	9/16	14.288	6393	1.90
1/4	6.350	1520	1.10	5/8	15.875	7733	1.90
9/32	7.144	1873	1.10	11/16	17.463	9133	1.90
5/16	7.938	2253	1.10	3/4	19.050	10667	2.00
11/32	8.731	2667	1.10	7/8	22.225	14000	2.00
3/8	9.525	3113	1.40	1	25.400	17733	2.00

Chrome Steel Ball (size)

mm.	inches	inch.dec.	WEIGHT PER100 BALLS	CRUSHING LOAD	mm.	inches	inch.dec.	WEIGHT PER100 BALLS	CRUSHING LOAD
0.397	1/64	.015630	0.000026	–	24.607	31/32	.968779	6.121	25100
0.500	–	.019685	0.000051	–	25.000	–	.984252	6.422	25900
0.794	1/32	.031259	0.00021	–	25.400	1	1.000000	6.736	26600
1.000	–	.039370	0.00041	–	26.000	–	1.023622	7.224	–
					26.988	1-1/16	1.062519	8.080	29600
1.190	3/64	.046850	0.00073	–	28.000	–	1.102362	9.023	–
1.500	–	.059055	0.00138	–	28.575	1-1/8	1.125000	9.551	32800
1.588	1/16	.062519	0.00164	–	30.000	–	1.181102	11.098	–
2.000	–	.078740	0.00326	–	30.163	1-3/16	1.87519	11.280	36100
					31.750	1-1/4	1.250000	13.194	39500
2.381	3/32	.093740	0.00638	–					
2.500	–	.098425	0.00560	–	32.000	–	1.259842	13.469	–
2.778	7/64	.109370	0.00825	–	33.338	1-5/16	1.312519	15.208	43100
3.000	–	.118110	0.01103	–	34.000	–	1.338582	16.155	–
					34.925	1-3/8	1.375000	17.510	46800
3.175	1/8	.12500	0.01301	666	35.000	–	1.377952	17.622	–
3.500	–	.137795	0.01762	792	36.000	–	1.417323	19.177	–
3.969	5/32	.156259	0.02553	990	36.513	1-7/16	1.437519	20.006	50600

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STEEL SHOT

Chrome Steel Ball (size)

4.000	–	.157480	0.02630	1000					
4.500	–	.177165	0.03745	1240	38.000	–	1.496063	22.554	–
4.763	3/16	.187519	0.04412	1370	38.100	1–1/2	1.500000	22.732	54600
5.000	–	.196850	0.05138	1490	39.688	1–9/16	1.562619	25.718	–
5.500	–	.216535	0.06838	–	40.000	–	1.5748063	26.306	–
5.556	7/32	.218740	0.07028	1800	41.275	1–5/8	1.625000	28.955	62900
6.000	–	.236220	0.08878	2060	42.863	1–11/16	1.687519	34.452	–
6.350	1/4	.250000	0.1021	2280	44.450	1–3/4	1.750000	36.098	71700
6.50	–	.255905	0.1129	–					
					45.000	–	1.771653	37.453	–
7.000	–	.275590	0.1409	–	46.038	1–13/16	1.812319	40.269	–
7.144	9/32	.281259	0.1498	2810	47.625	1–7/8	1.875000	44.609	81100
7.500	–	.295275	0.1734	–	49.213	1–15/16	1.937519	48.984	–
7.938	5/16	.312519	0.2056	3380	50.000	–	1.968504	51.379	–
8.000	–	.314960	0.2104	–	50.800	2	2.000000	53.884	90900
8.500	–	.334645	0.2524	–	53.975	2–1/8	2.125000	64.633	–
8.731	11/32	.343740	0.2658	4000					
9.000	–	.354300	0.2996	–	55.000	–	2.165354	68.382	–
9.525	3/8	.375000	0.3554	4670	57.150	2–1/4	2.250000	76.923	112000
					60.000	–	2.362204	88.782	–
10.000	–	.393700	0.4110	5090	60.325	2–3/8	2.375000	89.415	–
10.319	13/32	.406260	0.4434	5380	60.500	2–1/2	2.500000	105.242	135000
11.000	–	.433070	0.5471	–	65.000	–	2.559055	112.878	–
11.113	7/16	.437519	0.5641	6140	66.675	2–5/8	2.625000	121.968	–
11.906	15/32	.468740	0.6931	6940					
12.000	–	.472441	0.7102	–	69.850	2–3/4	2.750000	140.379	159800
12.700	1/2	.50000	0.8420	7780	70.000	–	2.755905	140.983	–
					73.025	2–7/8	2.875000	160.554	–
13.000	–	.511811	0.903	–	75.000	–	2.952755	173.402	–
13.494	17/32	.531260	0.010	8660	76.200	3	3.000000	181.859	168500
14.000	–	.551881	1.128	–	79.375	3–1/8	3.125000	205.746	–
14.288	9/16	.551881	1.202	9590	80.000	–	3.149606	210.446	–
15.000	–	.590551	1.387	10500					
15.081	19/32	.593740	1.413	10600	82.550	3–1/4	3.250000	231.638	–
15.875	5/8	.625000	1.649	11600	85.000	–	3.346456	252.421	–
					85.725	3–3/8	3.375000	258.709	–
16.000	–	.629921	1.684	–	88.900	3–1/2	3.500000	288.785	–
16.669	21/32	.656260	1.906	12600	90.000	–	3.543307	299.640	–
17.000	–	.669291	2.019	–	92.075	3–5/8	3.625000	311.106	–
17.463	11/16	.687519	2.187	13700	95.000	–	3.740157	352.403	–
18.000	–	.708661	2.397	–					
18.256	23/32	.718740	2.501	14800	95.250	3–3/4	3.750000	355.753	–
19.050	3/4	.750000	2.842	16000	98.425	3–7/8	3.875000	392.500	–
					100.000	–	3.937008	411.028	–
19.844	25/32	.781260	3.239	17200	101.600	4	4.000000	431.072	–
20.000	–	.787401	3.288	17400	107.850	4–1/4	4.250000	517.056	–
20.638	13/16	.812519	3.618	18400	110.000	–	4.330780	547.078	–
21.000	–	.826771	3.808	–	114.300	4–1/2	4.500000	613.930	–
21.432	27/32	.843779	4.065	19700					
22.000	–	.866141	4.377	–	120.000	–	4.724409	710.257	–
22.226	7/8	.875039	4.512	21000	120.650	4–3/4	4.750000	721.857	–
					127.000	5	5.000000	841.927	–
23.000	–	.905512	5.001	–	133.350	5–1/4	5.250000	974.649	–
23.020	29/32	.906299	5.015	22300	139.700	5–1/2	5.500000	1120.620	–
23.813	15/16	.937519	5.550	23700	146.050	5–3/4	5.750000	1280.507	–
24.000	–	.944882	5.682	–	152.400	6	6.000000	1454.870	–

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