



Hindustan Platinum



PLATINUM LABWARE

RARE EXCELLENCE



Hindustan Platinum At A Glance

Founded in 1961, Hindustan Platinum is a trusted global partner in the refining and manufacturing of precious metal products and industrial solutions.

Strategically located in Navi Mumbai, our state-of-the-art facilities support an efficient global supply chain, serving customers in more than 50 countries, with an international presence in the UAE and Puerto Rico.

We work across key industries including petrochemicals, pharmaceuticals, man-made fiber industry, glass and optical glass industry, electronics, automotive, fertilizers, supporting applications that demand high material integrity and process reliability.

Our focus remains on delivering consistent quality, responsive service, and long-term partnership — underpinned by robust systems, global certifications, and responsible operating practices.

Our Businesses



Refining
Services



Catalysts &
Chemicals



Electrical
Contacts



Nitro
Technologies



Engineered
Products



Electronic
Materials



Precious Metal
Management

Our Accreditations



LONDON
PLATINUM &
PALLADIUM
MARKET



LBMA
GOOD DELIVERY
REFINER

IMS Integrated
Management
System



SCIENCE
BASED
TARGETS





Why Hindustan Platinum

Precision Engineering Beyond Products

At Hindustan Platinum, customers gain more than products—they gain a trusted engineering partner. We develop precision-engineered solutions that enhance accuracy, consistency, and reliability in critical end-application processes, supporting industries where performance leaves no room for compromise.

End-to-End Manufacturing Excellence

Our fully integrated in-house capabilities — from precious metal refining to precision manufacturing — provide complete control over material composition, purity, and product quality. Every solution is tailored to specific application requirements, ensuring optimal performance. Beyond manufacturing, we also offer refining, recovery, and refurbishment services that help maximize product life and precious metal value.

Assured Quality. Reliable Performance.

Quality begins with responsibly sourced, high-purity precious metals and is maintained through every stage of manufacturing. With stringent quality controls, advanced process expertise, and we deliver products that provide consistent, accurate, and reliable performance in demanding industrial applications.

Clean Processes. Responsible Manufacturing.

Sustainability is integrated into the way we operate. Our Integrated Management System (IMS), certified to **ISO 9001, ISO 14001, ISO 45001, and ISO 50001**, ensures excellence in quality, environmental management, occupational health & safety, and energy management. Supported by integrated effluent treatment, and stringent air - emission controls, we continually improve our processes to reduce environmental impact while enhancing energy and water efficiency.

About Platinum

Platinum is a rare, silvery-white metal known for its exceptional resistance to corrosion, oxidation, and chemical attack, even at high temperatures. With a high melting point of around 1,768°C, excellent conductivity, ductility, and catalytic properties, platinum is valued for its thermal stability, chemical inertness, and reliability across demanding applications.

Platinum serves diverse industries including automotive, chemical, electronics, healthcare, jewellery, and R&D. In laboratories, platinum crucibles, dishes, and thermocouple wire are widely used for high-temperature testing, analytical chemistry, metallurgy, glass, and materials research, offering exceptional durability, purity, and resistance to aggressive reagents.



Properties of Platinum

Density	21.45 g/cm ³
Melting Point	1770°C
Electrical Resistivity at 0°C	9.85 μ Wcm
Temp coeff of resistance (0-100°C)	0.0039°C ⁻¹
Annealed Hardness	40 H _v
Ultimate Tensile Strength at 20°C	125 N/mm ²
Tensile Elongation at 20°C	40%
100-Hour Rupture Stress at 1450°C	0.9 N/mm ²
100-Hour Rupture Stress at 1250°C	3.8 N/mm ²
Glass Wetting Resistance (Equilibrium Contact Angle of "E" Glass at 1200°C)	26

Product Profile

Introduction

There is a constant increase in need for metallic material with melting point over 1700°C (for use at very high temperature) and for metals having characteristics like chemical stability, oxidation resistance in air and resistant to many molten oxides.

Chemical analysis usually involves processes with exothermic reactions. Due to this, conventional material such as tantalum, molybdenum, glass, nickel, etc. cannot be used. As Platinum possesses the above mentioned properties and is highly ductile and malleable, laboratory wares are usually made from high purity Platinum. For specific applications, other precious metals such as Rhodium, Iridium or Gold might be added to Platinum to either increase mechanical strength or to increase non-wetting properties.

Our most common Laboratory apparatus have been standardized. Hindustan Platinum manufactures all special purpose products made from precious metals to meet customers' specific requirement. We would be pleased to undertake work on standard or customized purpose apparatus.

All platinum laboratory apparatus dimensions and weights shown in this catalogue are to be taken as a guide only, and may be subject to fluctuation.

We believe in innovation

When technology and innovation meet, engineered products are brought to life. Armed with an in-depth knowledge of engineered products, we at Hindustan Platinum possess a world-class calibre to provide our customers precious metals engineering materials, that are purely defined as distinguished, exceptional and unmatched.

We manufacture Platinum Labware and Temperature Sensing Products



Product Offering

PLATINUM LABWARE: Crucibles & Dishes

Considering the chemical stability and resistance to oxidation and corrosion, crucibles and dishes of Platinum and Platinum alloys are mainly used as equipment in Research and Development. The tables on the following pages show the standard forms

of crucibles and dishes. Apart from standard forms, we also deliver crucibles and dishes in different thicknesses with reinforced rim, and in case of dishes with or without pouring lid. Crucibles and dishes of other sizes and shapes such as cylindrical, conical etc. with different types of lids are offered against individual specifications in pure Platinum, Platinum / Rhodium or Platinum / Gold.

Platinum Crucibles

Crucibles shape 'AZ'

Crucibles in these series have nominal capacities ranging from 5cc to 250cc. These crucibles are designed with an extra thick base to withstand heavy wear. Unless otherwise specified crucibles are always supplied having a plain rim and with lid. The purity of Platinum used for manufacture of AZ crucibles is at least 99.95%.



HP Model No.	Capacity (cc)	Top Diameter (mm)	Height (mm)	Approximate Weight in Gm		
				Standard Form	With Reinforced Rim Only	Standard Cover Only
101	5	22	22	4	5	1.5
102	8	25	24	6	7	1.5
103	10	25	28	7	7.5	2
104	15	30	31	11	12	3
105	20	33	35	15	16	4
106	25	36	34	19	20	4
107	30	40	36	22	24	6
108	35	41	38	25	26	6
109	40	42	42	30	32	7
110	50	45	44	38	40	8
111	60	45	47	46	48	9
112	70	49	53	50	52	12
113	80	52	53	51	54	14
114	90	54	57	52	59	15
115	100	56	57	59	68	17
116	110	57	60	68	71	19
117	120	64	66	84	88	22
118	150	65	69	100	104	27
119	200	79	65	150	159	30
120	250	81	73	175	179	32

Crucibles shape 'BZ'

Crucibles in these series have nominal capacities ranging from 8cc to 200cc. These crucibles are designed with an extra thick base to withstand heavy wear. Unless otherwise specified crucibles are always supplied having a plain rim and with lid. The purity of Platinum used for manufacture of BZ crucibles is at least 99.95%.



HP Model No.	Capacity (cc)	Top Diameter (mm)	Height (mm)	Approximate Weight in Gm		
				Standard Form	With Reinforced Rim Only	Standard Cover Only
121	8	25	21	6	7	1.5
122	10	26	26	7	7.5	2
123	15	30	27	11	12	3
124	20	33	28	15	16	4
125	25	36	30	19	20	4
126	30	40	32	22	24	6
127	35	42	33	25	26	6
128	40	43	34	30	32	7
129	50	46	37	38	40	8
130	60	48	39	46	48	9
131	70	52	41	50	52	12
132	75	52	44	50	52	13
133	80	52	47	51	54	14
134	90	57	48	52	59	15
135	100	57	51	59	68	17
136	110	57	54	68	71	19
137	120	57	57	84	88	22
138	125	58	59	97	101	25
139	200	79	66	150	159	30

Customised sizes available on request

Dishes

Standard Form

We design standardized form dishes with a round thick base for heavy wear, with a pouring lid and without lid that ranges between 25 cc to 700 cc. Also, manufacturing shallow dishes to specification along with lids of watch-glass type or crucible type is our expertise. Shallow dishes for iron and steel, water and sugar analysis can be manufactured to specification along with Lids of watch-glass type or crucible type with options of reinforced rim and/or heavy bottom.



HP Model No.	Capacity (cc)	Top Diameter (mm)	Height (mm)	Approximate Weight in Gm		
				Standard Form	With Reinforced Rim Only	Standard Cover Only
140	25	42	23	8	9	10
141	35	49	25	12	13	13
142	40	51	26	15	17	14
143	50	57	26	19	22	15
144	60	63	27	24	26	18
145	75	70	28	28	31	20
146	100	75	29	37	41	22
147	125	77	34	42	44	28
148	150	83	35	57	62	33
149	175	85	40	55	59	41
150	200	90	40	74	80	44
151	250	100	41	93	100	45
152	300	110	45	94	98	55
153	400	118	48	133	137	58
154	500	125	50	170	180	65
155	799	143	58	200	212	82

Customised sizes available on request



Platinum, Platinum/Rhodium and Platinum/Gold alloy Crucible and mould XRF Analysis

Platinum and its alloy possess the following properties to use for laboratory apparatus:

- Higher strength
- High melting point
- Ductility
- Corrosion resistance
- Oxidation resistance

And therefore, Platinum and its alloy are widely used as an analytical laboratory apparatus. The properties of Platinum and its alloys are summarized as under:

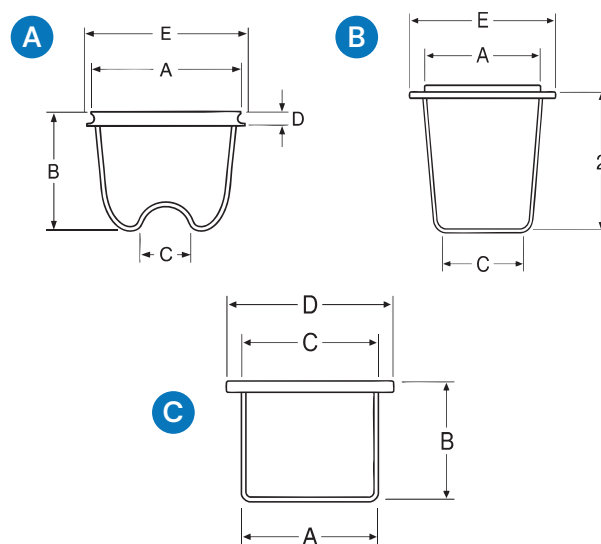
Platinum / 10% Rhodium

This Platinum group metal alloy melting point as high as 1850 degree Celsius. This alloy has greater hardness and higher strength.

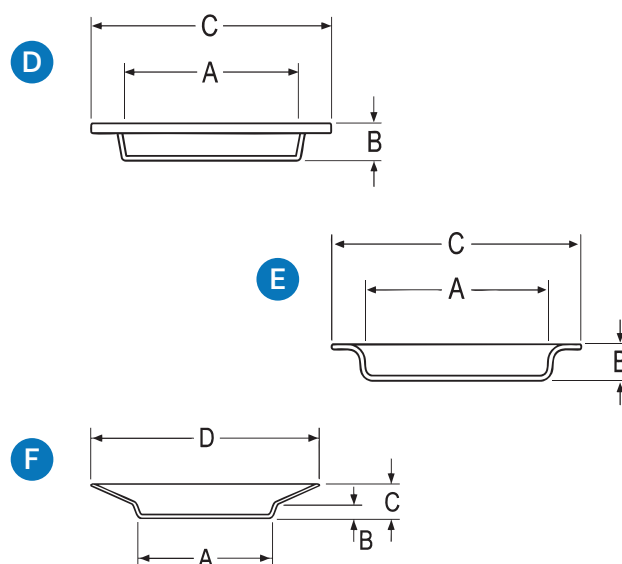
Platinum / 5% Gold

This alloy is universally accepted for Crucibles and casting moulds for spectro-graphics analysis by x-ray fluorescence (XRF). This alloy has property of higher temperature strength than pure Platinum and has "non-wetting" property for easy removal of the sample after fusion and allows many reproducible assays.

Different Shape of XRF Crucible



Different Shape of XRF Casting Dish



Combustion Boats

Our standard Combustion Boats are available with or without a handle in the following specifications. Sizes can be customized to suit the client's requirements.

Micro-Combustion Boats can also be manufactured against special orders.

HP Model No.	Length (mm)	Width (mm)	Depth (mm)	Weight (in Gm)
HP 168	38.1	12.7	9.5	3
HP 169	50.9	12.7	9.5	4
HP 170	76.2	12.7	9.5	7
HP 171	95.3	12.7	9.5	9
HP 172	101.6	12.7	9.5	12

Customised sizes available on request

Filter Cones

Our standard filter cones, manufactured from perforated Platinum sheet with 36x0.9mm holes per sq. cm. are available in following sizes. They can be specially customized as well.

HP Model No.	Diameter (mm)	Depth (mm)	Approximate Weight (in Gm)
HP 173	20	17	1.5
HP 174	25	22	3
HP 175	50	43	12

Customised sizes available on request

Foils

Platinum foils are made to superlative standards of high precision and quality. Foils completely free of burrs and proven indispensable to operation are available in the exact specifications required by our clients.

Micro Chemical Apparatus Allied

There are certain conditions where traditional methods cannot be used. In such cases, Microchemistry allows a technique for performing chemical



experiments on trace quantities. Micro chemical apparatus are manufactured for the same by considering the specifications and properties for which the apparatus is to be used.

HP Model No.	Capacity (cc)	Top Diameter (mm)	Height (mm)	Approximate weight (in gms)		
				Dish with plain rim	Dish with Reinforced rim	Crucible Type Lid
HP 186	10	35	17	7	9	5
HP 187	15	38	19	10	12	5.5
HP 188	20	42	20	12	15	7.5

Temperature Sensing Products - Wires

Manufacture platinum wires of a very high standard, uniform composition and free from chemical or physical defects. We have available wire diameter ranges from 0.025mm to 5.00mm. Platinum and its alloys are reliable sensing elements in high temperature measurement. We make temperature sensing products that give better process control, consistent product and improved energy conservation. This includes thermocouple wires, resistance thermometers, throwaway tips and alpha wires. We also supply precious metal sheaths, wherever necessary.

Platinum and Rhodium Wires

Platinum and Platinum/Rhodium thermocouple wires are widely used for optimum accuracy and stability for measuring temperatures ranging from 1000°C to 1800°C. These are produced from high purity metals to maintain accurate e.m.f. values within tolerances of international standards.

Generally negative wires are of pure Platinum and positive wires are of Platinum/Rhodium 10% or Platinum/Rhodium 13% ranging in diameter from 0.20mm to 1.0mm as ex-stock basis. These stress relieved wires are manufactured from highly pure virgin metals with only spectrographic traces of other elements.

Material	Unit	Pt	Pt 6% Rh	Pt 10% Rh	Pt 13% Rh	Pt 30% Rh
Specific gravity at 20°C	$\frac{g}{cm^3}$	21.4	20.6	20	19.6	17.7
Specific electrical resistance at 20°C	$\frac{Wmm^2}{m}$	0.107	0.185	0.193	0.197	0.21
Average temperature coefficient of the resistance 20 to 1600°C	$\frac{1}{^{\circ}C}$	3.10^{-3}	1.810^{-3}	1.410^{-3}	1.310^{-3}	1.310^{-3}
Thermal conductivity at 20°C	$\frac{cal}{s\ cm^{\circ}C}$	0.166	0.085	0.072	0.065	0.055
Specific heat at 0°C	$\frac{1}{g^{\circ}C}$	0.032	0.034	0.035	0.036	0.04
Average thermal expansion between 20°C and 800°C	$\frac{1}{^{\circ}C}$	9.310^{-6}	9.110^{-6}	9.010^{-6}	9.010^{-6}	8.810^{-6}
Tensile strength σ_b	Kp/mm ²	12 to 16	25 to 30	30 to 35	34 to 38	45 to 50
Ductility δ_{100}	%	25 to 35	25 to 30	20 to 30	20 to 30	20 to 30

Specification and Calibration

Platinum and Platinum/Rhodium Wires are made to ISI specification IS: 6683:1973 and as amended thereafter, they meet International Standards and

are in accordance with the EMF/Temperature relationship based on the International Temperature Scale of 1990 (ITS 90).

Type	Combination		Working Temperature Range °C	
	-ve	+ve	Maximum	Continuously
S	Pt	Pt/10%Rh	1600	1300
R	Pt	Pt/13%Rh	1600	1300
B	Pt/6%Rh	Pt/30%Rh	1700	1500

Platinum and Platinum/Rhodium Wires

Wire Diameter Tolerance

Diameters mm	Tolerance mm
0.025 - 0.05	± 0.001
0.05 to 0.09	± 0.001
0.10 to 0.25	± 0.005
0.30 to 0.40	± 0.005
0.45 to 1.00	± 0.010
1.50 to 2.00	± 0.020



Pure Platinum Wire for RTD

Resistance thermometers, also called resistance temperature detectors (RTDs), are sensors used to measure temperature. Many RTD elements consist of a length of fine wire wrapped around a ceramic or glass core but other constructions are also used. The RTD wire is a pure material, typically made of Platinum, Nickel, or Copper.

Platinum resistance thermometers (PRTs) offer excellent accuracy over a wide temperature range (from -200°C to +850°C). The most common type (PT100) has a resistance of 100 ohms at 0°C and 138.4 ohms at 100°C. There are also PT1000 sensors that have a resistance of 1000 ohms at 0°C.

Furnace Winding Wires

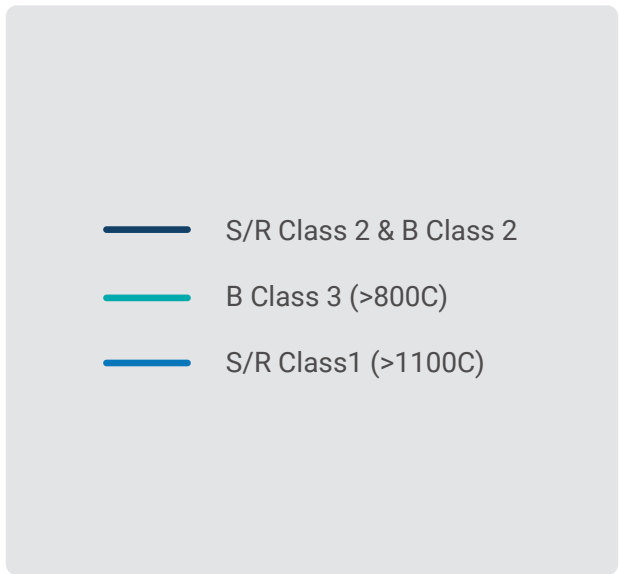
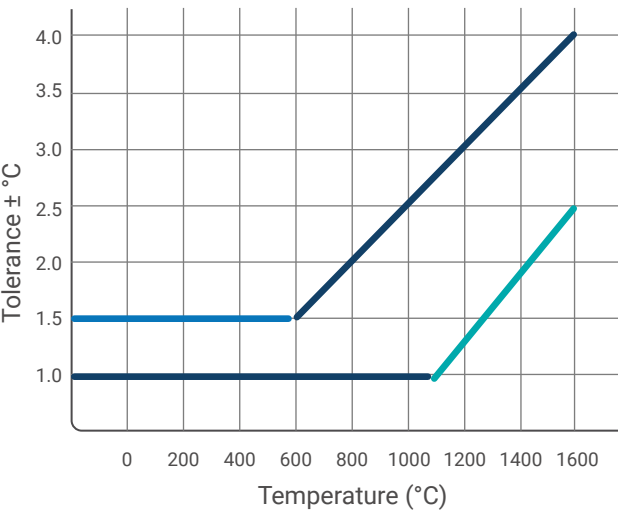
Platinum and Platinum/Rhodium wires are employed for winding the furnaces for the temperature above 1000°C because of their high melting point and

resistance to reaction with oxygen in air. Although these resistors cost more compared to those made of base metals, their longer life and higher resale value make them far more economical for furnace winding. These wires can be reworked into new ones at nominal charges when scrapped.

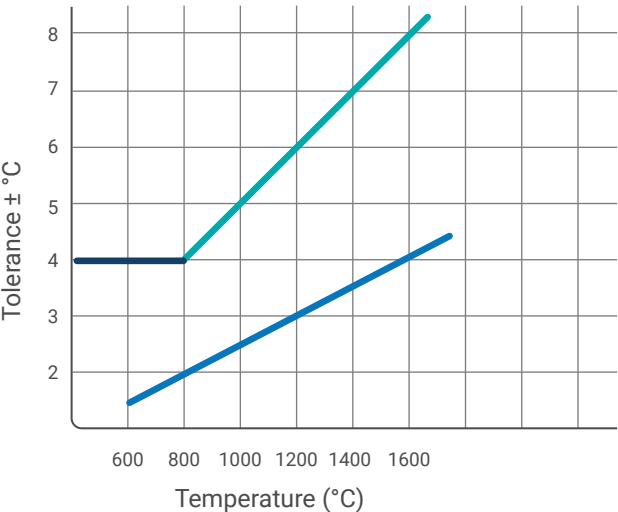
Properties of Platinum Furnace Winding Wires

Details	Platinum	Platinum / 10% Rhodium Wire	Platinum / 20% Rhodium Wire
Melting Point	1773	1830	1860
Specific Gravity	21.4	20	18.7
Resistance: Ohm/mil ft	65	115	125

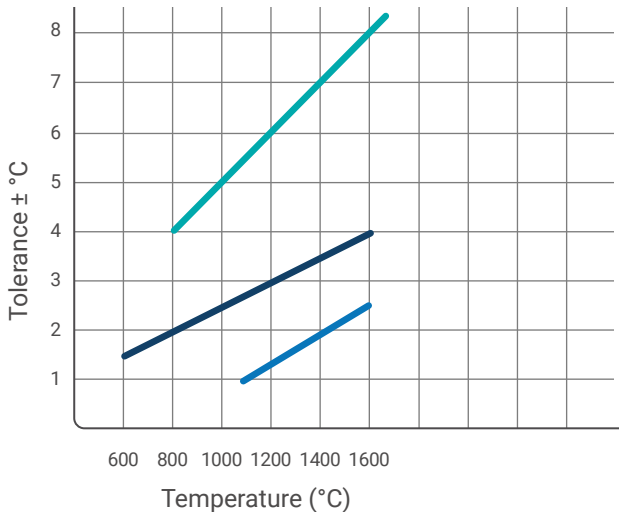
Type S / R (IS 2053 / IEC 60584-1)



Type B (IS 2053 / IEC 60584-1)



Comparison



Responsible Recycling of Used Platinum Laboratory Ware

We are committed to the responsible recycling and recovery of used Platinum laboratory ware. Our process enables the safe collection, handling, recovery, and refining of platinum-containing materials, helping conserve valuable resources while reducing environmental impact.

Used Platinum laboratory ware is carefully processed to recover its precious-metal value through responsible refining and recycling practices. This approach promotes resource efficiency, supports the circular use of Platinum, and ensures responsible management of valuable materials.



Cleaning & Maintenance Guidelines

Regular cleaning is essential to maintain the purity, durability, and performance of Platinum Labware.

The following methods can be used for effective cleaning:

- Immersion of labware in Chromic acid cleaning mixture to remove organic matter
- Boiling with Hydrochloric acid to remove insoluble carbonates or metal oxides
- Cleaning by fused potassium bisulphate to remove adherent silica, silicates, metal and metal oxides
- After cleaning, the Platinum labware should be polished. Cleaning material, clean sand or talc can be used for polishing
- Certain precautions need to be taken while using Platinum. Destructive elements are released due to thermal decomposition under reduced conditions. Therefore, it is necessary to carry the process in open crucibles. At higher temperature, Platinum diffuses through the walls of equipment and can reduce the material contained within
- Presence of even trace amount of silicon, lead or arsenic forms a low melting point alloy with Platinum. This causes damage to equipment when heating takes place in muffle furnaces
- Ensure prevention of Platinum being oxidized in air at any temperature or attacked by acid
- Alkaline earths, caustic alkalis, nitrates and hydroxides of barium and lithium attack Platinum at high heat
- Platinum apparatus should not be treated with easily reducible metals like lead
- Avoid heating Platinum with phosphorous and arsenic
- Clean well, handle gently and place on clean refractory surface after use
- Remove stains by boiling in dilute nitric acid
- Polish dulled surfaces with red sand

Precision Manufacturing. Responsibility for Sustainability.



733 tCO₂e

reduced annually
through clean
energy transition



≥92%

water recovery
enabling near closed
loop operations



99.9%

landfill diversion
achieving
near-zero waste



31%

renewable
electricity powering
our facilities

Milestone Of Excellence



From Local Roots to Global Reach

- 1952 : Established as a proprietary firm
- 1961 : Incorporated through equity, technical partnership
- 1976 : Entered full ownership under the Choksi family
- 2019 : Acquired the Puerto Rico plant, expanding electrical contact manufacturing capacity.

Innovation and Growth

- Pioneered bimetal rivets for the Indian market : 1973
- Pioneered high purity sputtering targets in India : 1996
- Strengthened R&D capabilities for Catalysis and other engineered products : 1999
- Major infrastructure upgrade to scale technology and production : 2018
- Advancing catalytic solutions and next-generation electronic materials : 2026



Global Validation and Scale

- 2005 : Achieved multiple global certifications across quality, safety, and sustainability (ISO, IMS, AEO)
- 2014 : Recognized by global bullion and precious metals bodies
- 2016 : (LBMA & LPPM Good Delivery listings)
- 2020 : NABL accreditation for high-purity precious metal testing

Sustainable Growth

- Began the long-term shift to renewable energy with a 4.5 MWp wind power investment : 2004
- Established the Choksi Charitable Foundation : 2015
- Achieved EcoVadis certification : 2022
- Expanded solar capacity with a 238 kWp rooftop installation. : 2023
- Emissions reduction targets validated by SBTi : 2025
- Achieved EcoVadis Gold : 2026



Industries We Serve	Products We Make
Electroplating industry	Precious metal salts and solutions
Fertiliser, industrial & defense explosives, Caprolactam & cyanide manufacturers gauzes	Platinum/Rhodium catalyst Palladium alloy catchment gauzes
Glass fiber and glass wool industries	Platinum/Rhodium alloy bushings Spinner baskets
Glass and optical glass industries	Platinum/Rhodium alloy stirrers Thimbles, orifice rings, liners, etc
Man-made fiber industries	Precious metal spinnerets cluster spinnerets Tantalum filters Stainless steel spinnerets
Pharmaceutical and chemical industries	Precious metal salts supported and unsupported catalysts
Research and analytical laboratories	Platinum laboratory apparatus
Steel and glass industries	Platinum and Platinum/Rhodium Thermocouple wires Throwaway tips
Switchgear, control gear, automobile, spacecraft, elevator and home appliance industries	Electrical contacts
Oil refineries, petrochemical industry and all other industries	Recovery and refining of precious metals from industrial scrap
Jewellery Industry	Supplier of Pt & Pt 950 products



Hindustan Platinum

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