



Smolensk Diamonds | Perfactory® 4 Mini XL

“Thanks to the implementation of the 3D Printers from EnvisionTEC we are able to produce unique custom designs of the highest quality very quickly for our clients”

Smolensk Diamonds Jewellery Group are part of the Kristall Production Corporation founded in 1963. Today Kristall employs over 2400 staff and it is the largest manufacturer of cut and polished diamonds in Russia and Europe with over 600,000 carats polished each year.

Smolensk Diamond Jewellery group was formed to produce high end specialist jewellery and one off custom pieces using the famous Kristall diamonds.



The crown was remodeled in 3D CAD carefully replicating every detail, this was transferred to the Perfactory machine where it was built in sections in WIC100 resin and cast in 14K white gold, the crown was assembled using traditional hand crafted techniques.

The Crown of the Russian Empire

On January 31, 2013, the General Staff Building hosted the latest meeting of the Hermitage Friends' Club O.G. Kostyuk, Deputy Head of



They have used 3D CAD and CAM for some years but decided to purchase a Mini Perfactory from EnvisionTEC GmbH via their distributor Ruta in 2010 and due the success of this another was installed during 2011.

Mr Kunzev said *“thanks to the implementation of the 3D Printers from EnvisionTEC we are able to produce unique custom designs of the highest quality very quickly for our clients”*

Smolensk Diamond Group also are asked to manufacture unique pieces and one such project was for the Hermitage Museum in St Petersburg.



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Mr. Kunzev said
“without the Perfactory 3D Printers such a task would have taken more than one year to produce the replica crown and a lot more staff. The accuracy we can achieve on an object this size is incredible and beyond skilled craftsmen using traditional methods”.

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the Department of Western European Applied Art, gave a lecture for the guests entitled The Great Imperial Crown. History and Modernity and a replica of the crown by the Jewelry Group Smolensk Diamonds was presented in one of the halls of the future Faberge' Museum.

It took two months to make the replica of the Grand Imperial Crown that was showcased at a jewelers' forum in St. Petersburg. Sixty jewelers from Smolensk made it for the 250th anniversary of the coronation of Catherine the Great and the 400th anniversary of the Romanov dynasty.

A total of 11 thousand diamonds adorn the white gold crown and spinel in the replica was replaced with a unique natural red tourmaline with a mass of about 400 karats.

The Imperial Crown of Russia, also known as the Great Imperial Crown, was used by the Emperors of Russia until the monarchy's abolition in 1917.



The Great Imperial Crown was first used in a coronation by Catherine II, and was last used at the coronation of Nicholas II.

Since December 20, 2000, the Imperial Crown has appeared on the Coat of arms of the Russian Federation. It is currently on display in the Moscow Kremlin Armory State Diamond Fund. No one is allowed even to touch that, and therefore that replica is the only one in the world. Jewelers are confident that a second replica will never be made. The replica will be exhibited in several Russian cities later this year.

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