



Ultrasonic Cleaning Systems for Tools and Components prior to PVD coating

PLURITANK series

Our strength:

- Vast technical experience
- Competence and flexibility
- Know-how, worldwide services

We offer:

- Reliability and productivity
- Excellent price-quality ratio
- Turnkey systems and solutions



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HIGH PRECISION CLEANING SYSTEMS
SURFACE TREATMENT TECNOLOGY

PLURITANK series



PERIPHERAL EQUIPMENTS



Since 1993, **NOVATEC S.r.l.** has been a meaningful name, synonym of design, production, set up and start up as well as service for ultrasonic cleaning and surface treatment systems; thanks to our experience and to the constant technological upgrading of our resources and equipment, we can offer to our Customers not only high-value products but also custom-caring and prompt competence in full-service.

NOVATEC, a manufacturer of high quality cleaning systems, thanks worldwide experiences and success, introduces its ultrasonic cleaning line series “**PLURITANK**” (Multi-tank machines) which, owing to its **modular construction method**, is designed to meet the many requirements for the treatment of different parts (tools or components) prior to PVD coating processes or other vacuum treatments.

Ultrasonic is the most efficient cleaning method available today; “**PLURITANK**” ultrasonic cleaning systems comprise a combination of different process modules, consisting of: ultrasonic immersion or spray cleaning tanks designed for use with aqueous detergent solutions, single or double-stage cascade immersion or spray rinsing tanks for deionised or tap water use, hot air dryers and vacuum dryers. All the modules in the system are entirely fabricated of stainless steel and **available in standard version or adaptable to customers’ specific production requirements.**

Friendly use industrial PLCs and HMIs control the process functions and the automatic handling systems (from 10 kg to 300 kg and more), as well as conveyors, automatic lids, ultrasonic, solenoid valves and further possible functions. The systems can also be equipped with bar code readers, which control the quantity and the type of product being treated, and “traceability” systems so to monitor the process constantly and save data and parameters related to the different stages as for times, temperature, ultrasonic power, trends, etc.

Thanks to the easy combination of these different process modules NOVATEC can meet any demand according to all customer’s specific needs.

POSSIBLE PROCESS COMBINATIONS for Tools and Components Cleaning:

- ✓ *Spray Pre-Cleaning - Oil Separation system*
- ✓ *US Cleaning (with mechanical agitation) - Oil Separation system*
- ✓ *Immersion Cascade Rinsing (with mechanical agitation or hydrokinetic turbulence)*
- ✓ *US Cleaning (with mechanical agitation)*
- ✓ *Immersion Cascade Rinsing (with mechanical agitation or hydrokinetic turbulence)*
- ✓ *(Option) Acid Immersion Rinsing or extra US Cleaning*
- ✓ *(Option) Immersion Cascade Rinsing (with mechanical agitation)*
- ✓ *D.I. Water US Immersion Rinsing (with mechanical agitation)*
- ✓ *Final D.I. Immersion Rinsing (with mechanical lift-out system)*
- ✓ *(Option) Manual or Automatic Blowing position*
- ✓ *Air Drying (single or double chamber)*
- ✓ *(Option) Vacuum Drying (for the complete degassing of the parts)*

USABLE TANK DIMENSIONS for standard “PLURITANK” systems:

- PLURITANK 50	300 x 400 x 420 h mm	- PLURITANK 80	400 x 500 x 400 h mm
- PLURITANK 110	400 x 500 x 550 h mm	- PLURITANK 210	500 x 700 x 600 h mm

Adaptable machine versions are available following customers’ specific requirements.

“**PLURITANK**” systems are the alternative to solvent-based systems, giving excellent cleaning without the associated health and safety issues.

Our attention is completely focused on the satisfaction of customers’ demands and on the offer of our know-how supplying high quality products and services worldwide.

Impianti di Lavaggio per la preparazione delle superfici al rivestimento PVD

Una superficie ben pulita è una delle condizioni essenziali per garantire una perfetta adesione del rivestimento antiusura sull'utensile. Il mercato offre diversi sistemi di lavaggio ma non tutti sono all'altezza delle elevate esigenze implicate nelle tecniche di deposito PVD. Novatec S.r.l., marchio specializzato nella progettazione, sviluppo e installazione di macchine per il lavaggio e trattamento delle superfici, propone proprio per quest'applicazione, impianti di lavaggio chiavi in mano, i quali integrano un idoneo processo chimico e garantiscono un risultato irreprensibile.

La pluriennale collaborazione con i più noti costruttori di impianti PVD, con e per i quali abbiamo realizzato impianti di lavaggio è garante della ns. esperienza. Numerose sono le referenze a prova sia della ns. competenza che dell'affidabilità e produttività delle ns. macchine.

Altro punto di forza è l'ottimo rapporto di qualità/prezzo che contraddistingue i ns. prodotti e che ha permesso di espandere la ns. attività a livello mondiale.

Per il processo di componenti già in uso è necessaria la rimozione completa di tutti i residui del vecchio rivestimento dalla superficie dei pezzi. Per questa applicazione Novatec sviluppa assieme ad esperti del settore una macchina completamente automatica per la rimozione di questo vecchio rivestimento PVD. Questi impianti pongono nuovi parametri di sicurezza sia riguardo al processo che all'ambiente di lavoro.

La nuova linea di lavaggio ad ultrasuoni consente di ottenere indiscutibili benefici, sia sul piano della qualità che dei consumi, e non da ultimo, un'altissima produttività. Con la combinazione del sistema di rimozione dei rivestimenti, i nostri sistemi dimostrano l'optimum nel pre-trattamento delle superfici prima del rivestimento PVD.

Ultrasonic Systems for surfaces cleaning prior to PVD coating

Cleanness is one of the main requirements to the surface of cutting tools in order to guarantee a perfect adherence of the wear protection coatings. There are different cleaning methods and equipment available on the market but not all of them respond to the high demands involved in the vacuum deposition technology. Novatec S.r.l., meaningful name, synonym of design, production, set up and start up as well as service for cleaning and surface treatment systems, specifically for this application, offers turnkey plants which integrate a suitable process and assure optimal cleaning results.

Our long-term cooperation with leading PVD plant manufacturers for and with whom we have supplied cleaning machines, answers for our experience in this field. A multitude of references testify on the one hand for our skill and on the other for the reliability and productivity of our systems.

Last but not least we owe our expansion to a world-class player to an attractive price-quality ratio.

For the coating process of used tools it is necessary to remove completely all residuals of the previous PVD layer from the surface. For this application Novatec developed in co-operation with experts a full automatic system to remove hard coatings. These systems place new graduations in industrial safety and process security.

This new ultrasonic cleaning line aims and allows to obtain unquestionable benefits, both concerning quality and consumption, as well as very high productivity. In combination with our decoating lines our systems show the optimum equipment to the surface pretreatment before PVD coatings.

Reinigungsanlagen zur Oberflächenbehandlung in Vorbereitung auf PVD-Beschichtung

Die absolute Reinheit ist eine der Hauptanforderungen an die Oberfläche der zu beschichtenden Werkstücke um eine perfekte Haftung der Verschleißschutzbeschichtung zu gewährleisten. Der Markt bietet verschiedene Reinigungssysteme an, wovon aber nicht alle den anspruchsvollen Bedürfnissen der PVD Beschichtungstechnik gewachsen sind. Novatec S.r.l. ein bedeutender Name, ein Synonym für Design und Produktqualität, Konstruktion, Produktion und Installation der Systeme im Sinne einer optimalen Reinigung bietet gerade für diese Anwendung hoch entwickelte Reinigungsanlagen an, die ein spezifisches Verfahren integrieren und optimale Reinigungsergebnisse garantieren.

Die mehrjährige Zusammenarbeit mit führenden PVD-Anlagenherstellern, für welche wir Reinigungsanlagen konstruiert, produziert und geliefert haben, steht als Garant unserer Erfahrung auf diesem Gebiet. Eine Vielzahl von Referenzanlagen zeugen einerseits von unserer Kompetenz und andererseits von der Zuverlässigkeit und Produktivität unserer Anlagen.

Nicht zuletzt ist unsere Firma dank dem interessanten Preis- und Leistungsverhältnis unserer Produkte weltweit tätig. Für den Beschichtungsprozess von gebrauchten Werkzeugen ist es zwingend erforderlich, sämtliche Rückstände der alten Schicht von der Oberfläche gründlich zu entfernen. Für diese Anwendung hat Novatec zusammen mit Experten ein vollautomatisches System entwickelt um Hartstoffschichten zu entfernen. Diese Systeme setzen neue Maßstäbe im Bereich des Arbeitsschutzes und der Prozesssicherheit.

Die neue Generation von Ultraschallreinigungsanlagen realisiert unumstrittene Vorteile bezüglich hoher Qualität, geringen Verbräuchen sowie hoher Produktivität. In Kombination mit unseren Entschichtungsanlagen bilden unsere Systeme eine optimale Ausrüstung zur Oberflächenvorbehandlung vor PVD-Beschichtungen.

Installations de nettoyage pour la préparation des surfaces au revêtement PVD

Une surface bien nettoyée est une des conditions essentielles afin de garantir une adhésion parfaite du revêtement anti-usure sur l'outil. Le marché offre différents systèmes de nettoyage mais pas tous sont à la hauteur des exigences élevés impliqués par les techniques de dépôt PVD. Novatec S.r.l., société spécialisée dans la conception, la fabrication et l'installation de machines destinées au nettoyage et au traitement de surfaces, propose juste pour cette application, des installations de lavage « clé en main », lesquelles, incorporant un procédé chimique approprié, garantissent un résultat irréprochable.

La collaboration pluriannuelle avec les fabricants les plus importants de machines PVD avec et pour lesquels nous avons réalisé des installations de lavage, est garant de notre expérience en matière. Nombreuses sont les références à l'épreuve de notre compétence et de la fiabilité et productivité de nos machines.

Autre point de force est l'excellent rapport qualité/prix qui caractérise nos produits et qui nous a permis d'étendre notre activité à niveau mondial.

En ce qui concerne le revêtement des outils utilisés il est nécessaire d'enlever complètement de la surface tous les résiduels de la couche précédente de PVD. Pour cette application Novatec a développé en coopération avec des experts du secteur un système automatique pour l'enlèvement des "hard coatings" vieux. Ces systèmes posent des nouveaux paramètres de sûreté pour le procès de traitement et même en ce qui concerne l'ambiant de travail.

La nouvelle ligne de nettoyage par ultrasons permet d'obtenir des indiscutables bénéfices, soit sur le plan de la qualité que des consommations, et ne donne pas achève, une très haute productivité. La combinaison avec nos lignes "stripping" montre l'optimum concernant l'équipement pour le traitement de la surface avant le revêtement PVD.