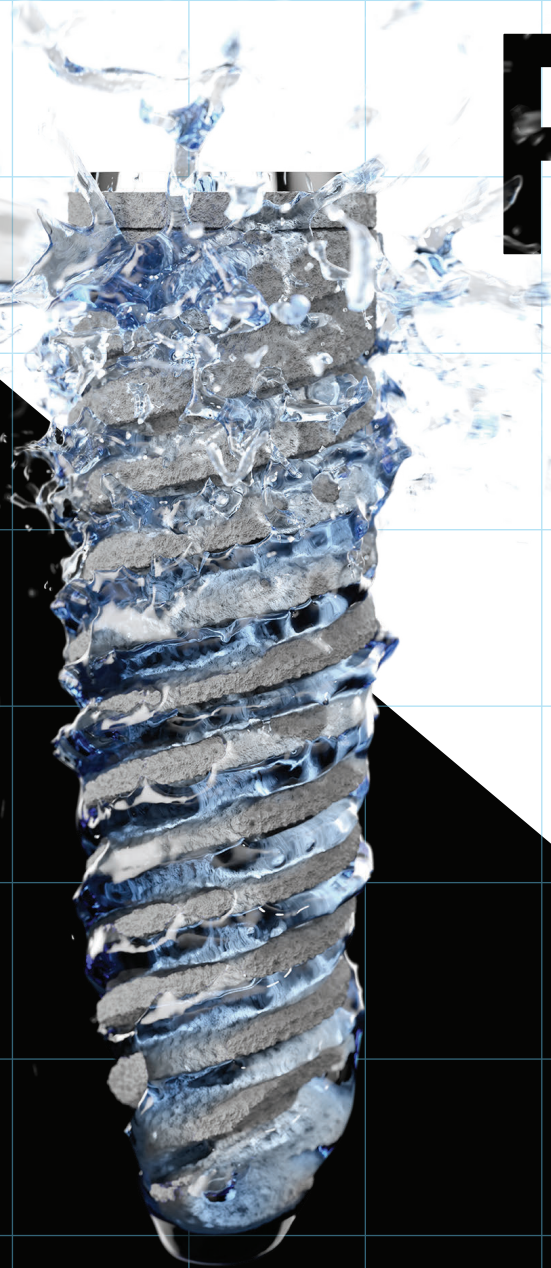


# HYDROSSEED PACKAGE

MAXIMUM HYDROPHILICITY.  
EXCELLENT INTEGRATION.



Superior Implant Technology

# MAKE IMPLANTS WORK FOR YOU



60-second real-time activation



Simple operation



Improves osseointegration, healing, and success rates



Promotes surface cleanliness and sterilization

AB Dental's HydrOsseo package is an out-of-the-box solution that turns any AB Dental implant into **super-hydrophilic in just 60 seconds**, using **plasma technology** to enhance implant wettability. This leads to improved osseointegration, faster healing time, and better implant success rates, especially in compromised bone cases.

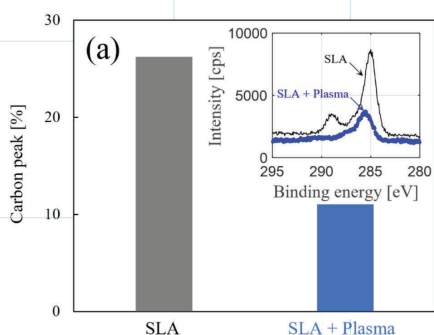
With HydrOsseo, you can take your dental practice to the next level and provide your patients with the best possible care, boosting your customer satisfaction, loyalty, and clinic reputation.



## EFFECTS ON THE IMPLANT

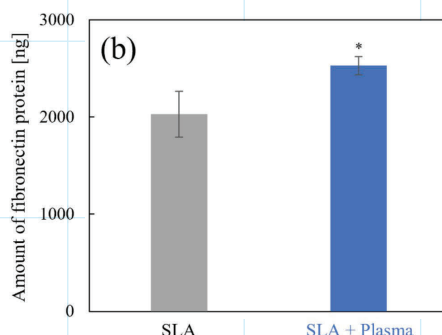
### HYDROPHILICITY

The surface of dental implants is typically hydrophobic at manufacture. The plasma treatment clears the implant surface of hydrocarbons, making it significantly more hydrophilic – with all the associated benefits.



### CLEANLINESS

The HydrOsseo treatment removes contaminants and impurities from the implant surface – even for sterilized implants – creating a safer implant environment.

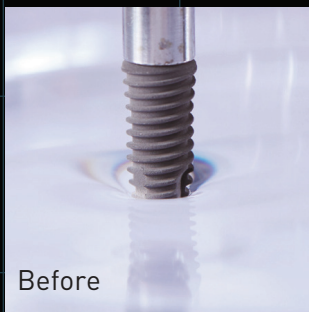


### What is plasma?

Plasma, the fourth state of matter, is a gas mixture consisting of neutral and electrically charged particles. Among other things, it is used to chemically modify the surface energy of materials.

# CLINICAL BENEFITS

- Increased bone-to-implant contact (BIC)
- Complete implant surface wettability and coverage
- Greater initial protein attachment and osteoblast proliferation than with SLA/SLA+UV
- Faster healing and osseointegration – with an increase in bone volume
- Helps improve success rates through enhanced osteogenic potential in compromised bone cases
- Does not alter surface morphology/chemistry or impair SLA+AE results
- Enhanced production of osteoblast differentiation markers – more than in implants that have been grit-blasted or acid-etched alone
- Increased paracrine signaling factors, including BMP2 and VEGF-A



Before

Low wettability



After

High wettability

## Real-Time = Better Effect

Plasma effects degrade rapidly, meaning that pre-treated implants tend to lose hydrophilicity over time. AB Dental's HydrOsseo Package eliminates this problem by treating implants **immediately before implantation**, thus ensuring the strongest possible benefit.

# EASY WORK FOR THE DENTIST

- Portable, cost-effective method for enhancing implant outcomes
- 60-second procedure – Press a button while you prep the patient
- Works with any AB Dental implant
- Does not damage grit-blasting and/or acid-etching surface treatments
- Extends implant shelf life
- Potential benefit to periodontal treatments in areas with limited access to expensive implants

## Package Includes

- Plasma activator (including power cable, adaptor, accessories, and user manual)
- AB Dental's implants (500/1000 units)

## Specifications

Size (W x D x H)	170 x 345 x 266 mm
Weight	6 kg
Cycle Time	60 sec
Electricity	DC 24V, 3A
eV (electron density)	21eV

Medical device in US (Class I)



Electronic device in Europe, Korea, Japan, China, and EAC





Superior Implant Technology

## ORDER YOURS TODAY







To place an order, simply scan the code and fill out the form.

An AB representative will contact you with additional details shortly.

### ABOUT AB DENTAL

AB Dental is a worldwide developer, manufacturer, and provider of cutting-edge dental implants, prosthetic products, and surgical tools. Our comprehensive solution for dental implants covers all of the dentist's clinical and operational needs, including digital implant planning, surgical guides for individual custom implants, and more.

For more information, visit [www.ab-dent.com](http://www.ab-dent.com)

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DMS 32708, Rev A 1023

### SCIENTIFICALLY PROVEN

AB Dental's HydrOsseo package builds on a large body of clinical literature. For more on the science behind plasma treatments and implant hydrophilicity, here is a short list of important articles:

1. Lai Hui W, Perrotti V, Iaculli F, Piattelli A, Quaranta A. The emerging role of cold atmospheric plasma in implantology: A review of the literature. *Nanomaterials* 2020, 10(8):1505. doi.org/10.3390/nano10081505
2. Berger MB, Bosh KB, Cohen DJ, Boyan BD, Schwartz Z. Benchtop plasma treatment of titanium surfaces enhances cell response. *Dental materials* 2021, 37(4): 690–700. doi.org/10.1016/j.dental.2021.01.026
3. Lee H, Jeon HJ, Jung A, Kim J, Kim JY, Lee SH, Kim H, Yeom MS, Choe W, Gweon B, Lim Y. Improvement of osseointegration efficacy of titanium implant through plasma surface treatment. *Biomed. Eng. Lett.* 2022, 12:421–432. doi.org/10.1007/s13534-022-00245-9
4. Jang MH, Park YB, Kwon JS, Kim YJ, Lee JH. Osseointegration of plasma jet treated titanium implant surface in an animal model. *Materials* 2021, 14:1942. doi.org/10.3390/ma14081942
5. Berger MB, Cohen DJ, Levit MM, Puetzer JL, Boyan BD, Schwartz Z. Hydrophilic implants generated using a low-cost dielectric barrier discharge plasma device at the time of placement exhibit increased osseointegration in an animal pre-clinical study: An effect that is sex-dependent. *Dental Materials*. 2022, 38(4):632–645. doi.org/10.1016/j.dental.2022.02.002
6. Jeon HJ, Jung A, Kim HJ, Seo JS, Kim JY, Yum MS, Gweon B, Lim Y. Enhanced osteoblast adhesion and proliferation on vacuum plasma-treated implant surface. *Appl. Sci.* 2022, 12:9884. doi.org/10.3390/app12199884
7. Park JH, Olivares-Navarrete R, Baier RE, Meyer AE, Tannenbaum R, Boyan BD, Schwartz Z. Effect of cleaning and sterilization on titanium implant surface properties and cellular response. *Acta Biomater.* 2012, 8(5): 1966–1975. doi.org/10.1016/j.actbio.2011.11.026