

MSE

Maxillary Skeletal Expander

Invented by Prof. Won Moon
UCLA School of Dentistry

Prof. Won Moon D.M.D. M.S



Dr. Won Moon is the Founder of the Moon Principles Institute ("the MoonLab") and a Co-founder of

BioTech Innovation. He served as the Thomas R. Bales Endowed Chair in Orthodontics for the orthodontic residency program at UCLA School of Dentistry (2013-020), and he currently holds two academic positions: Full-Professorship at Ajou

University, and Adjunct Professorship at Forsyth Institute. He has been a Diplomate of the American Board of Orthodontics since 2002. He completed his dental education at Harvard and orthodontic education at UCLA. He studied mathematics prior to dentistry, and his research topics include 3D image analysis utilizing surface mapping functions and Elliptical Fourier's Descriptors, Genomewide Association Study of Craniofacial Phenotypes, Finite Element Model (FEM) Development and Simulation, Applications of 3D Printing in Orthodontics, Orthopedic Correction, Airway Changes with Orthopedic Corrections, Accelerated Tooth Movement, Micro-implant Design study, Digital Workflow, and Aligner System Development.

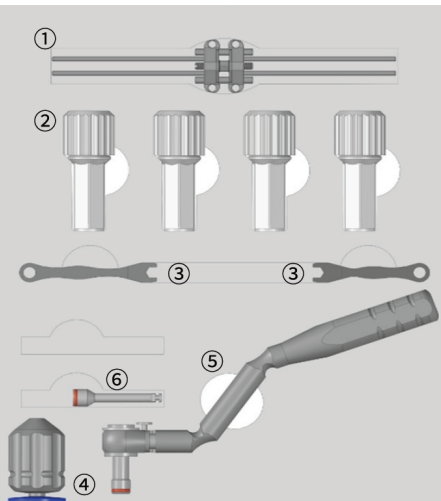
BIOMATERIALS KOREA

His work has been published in various journals, not necessarily limited to orthodontics because of his physical science background,

and he is a co-author of six textbooks. He has presented these findings in 37 countries, totaling over 450 presentations. He received multiple research grants during his tenure at UCLA, including the Groundbreaking Research Project Grant Award in 2014. Besides the numerous research and presentation awards over the years, he has received the "Faculty of the Year Award" more times than anyone at UCLA Orthodontic Program, and he was the recipient of the "Lifetime Achievement and Faculty Dedication/Excellence Award" in 2019. His current focus has been establishing protocols for orthopedic corrections with MI, improving the airway for patients with nasal obstruction, creating virtual patients utilizing image analysis and FEM, and developing a novel Moon Aligner System.

His interest in mid-facial expansion began in 2004 as micro-implant became available in the USA, and he is responsible for developing Maxillary Skeletal Expander (MSE), a unique micro-implant assisted rapid palatal expander (MARPE). He has been active in advocating non-surgical skeletal expansion in both children and adult patients, especially for those who may suffer from airway restrictions. His presentation in MSE has been widely accepted internationally and numerous peer-reviewed publications are available.

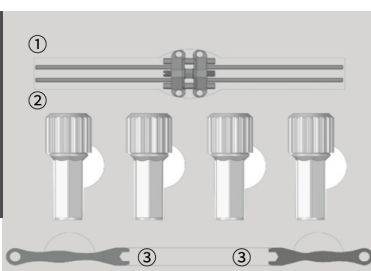
Starter kit



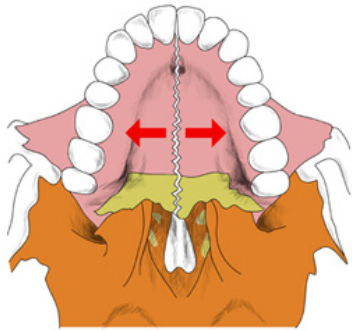
Components

- ① MSE Expander** (Available expansion sizes : 8mm, 10mm & 12mm)
Choose an expander size according to a width of patient's palatal vault
- ② Micro Implant(M.I)** (Ø 1.8mm X 11mm & 13mm Lengths are available)
Choose M.I length according to the thickness of patient's palatal bone
*For MSE type 1, M.I is Ø 1.5mm and for MSE type 2, M.I is Ø 1.8mm
- ③ 2 Activation Keys (1 Short & 1 Long)**
- ④ Mini Hand Driver**
Use with initial insertion of M.I placement
The best way is to use Mini Hand Driver for initial
- ⑤ Ratchet Wrench Driver**
Inserting and Removing M.I
- ⑥ Short Engine Blade (Shaft)**
Attach to Mini Hand Driver
- ⑦ Safety Leashes**
With ③ activation key

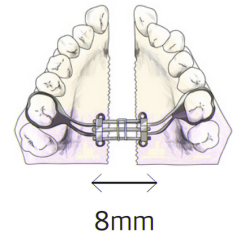
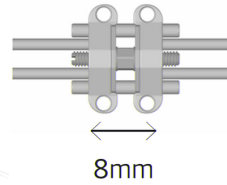
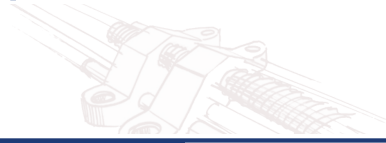
Refill kit



PRODUCT SPECIFICATION

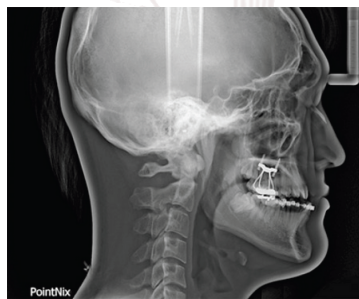
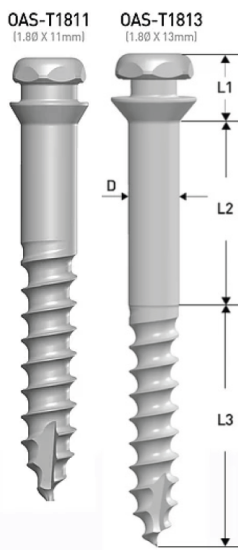


Expander Size



MSE	8mm	10mm	12 mm
A	14.1mm	16.1m	18.1mm

MINI SCREW



Model	D(Diameter)	L1(Head part)	L2(Non-thread part)	L3(Thread part)
OAS-1811	1.80	2.10	4.00	7.00
OAS-1813	1.80	2.10	6.00	7.00

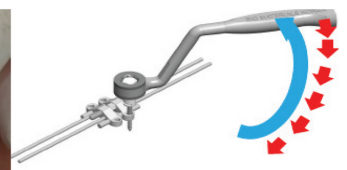
LAB WORK



INSERTION M.I



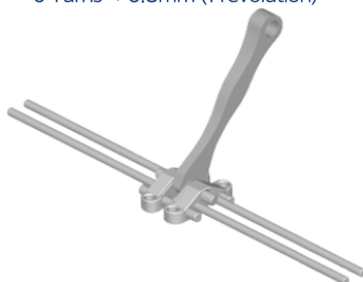
* [Manual Driver]_MHD + SEB



* [Manual Driver]_RW

ACTIVATION PROTOCOL

6 Turns \approx 0.8mm (1 revolution)



Early teens	6X / week (0.80mm / week)
Late teens	2X / day (0.27mm / day)
Early to Mid-20's	4~6X / day (0.53~0.80mm / day)
Older	Min. 4~6X / day
After Diastema	2X / day (0.27mm / day)

FORGALMAZZA



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