ONE SYSTEM. MULTIPLE APPLICATIONS. ZERO COMPROMISE.

The Dual Activation System is a single, innovative concept with multiple applications - all designed to enhance your treatment philosophy.

- The best of both worlds - interactive and passive brackets in one unified system
- Excellent anterior control
- Improved posterior freedom play
- Time saving benefits and ease of self ligation
- Metal and clear options

INTERACTIVE BRACKET
Less ligation friction during initial leveling and aligning
Increased torque and rotation control during finishing

PASSIVE BRACKET
Less ligation friction throughout treatment
No wires are actively engaged by the clip
THE CHOICE IS YOURS

As the most complete self ligating bracket system in the industry, Empower brings you an unprecedented array of possibilities, placing control back in your hands. Dual Activation allows you to truly make the system your own.

The orthodontists featured here highlight the best part of Dual Activation - the ability to personalize the system. All these doctors use the Dual Activation concept - but with various, personalized styles and techniques that enhance their treatment philosophies.

**DR. TROY CHRISTENSEN**
Dr. Troy Christensen is a former passive self ligating system user who switched to Dual Activation for improved anterior control. He owns and operates two private practices in the Phoenix, Arizona area.

**DR. DAN BILLS**
Dr. Dan Bills used a popular passive self ligating system for years before switching to Empower Dual Activation. He maintains a state-of-the-art private practice in Southern New Jersey, just outside of Philadelphia.

**DR. LAURA IRURZUN**
Dr. Laura Irurzun began using Empower and the Dual Activation System in 2008 after experiencing its ability to deliver a predictable and accurate finish. She currently teaches at University of Salvador School of Dentistry in Buenos Aires, Argentina.

**DR. N.R. KRISHNASWAMY**
Dr. Krishnaswamy utilizes Dual Activation due to its better control and improved efficiency over a fully interactive system. He practices and is a professor and Head of the Department of Orthodontics and Vice Principal of Ragas Dental College & Hospital in Chennai, India.
“Dual Activation allows me to more efficiently give my patients the great finish they deserve.”

DR. TROY CHRISTENSEN

Dr. Christensen graduated from UNLV in 1995 with a Bachelor of Science degree in Biomechanical Kinesiology. During his time in undergraduate study, he took a two year hiatus from his studies to serve a service mission in the Dominican Republic. He attended dental school at Creighton University and graduated Magna Cum Laude in 2000. While at Creighton he received numerous academic awards and distinctions, including memberships into the prestigious Alpha Omega International Dental Fraternity and Omricon Kappa Upsilon National Dental Honor Society, as well as membership into Alpha Sigma Nu, the National Jesuit Honor Society. He received his MS degree and certificate in Orthodontics from Baylor College of Dentistry in 2002.
When I was using a fully passive system, I enjoyed the lower ligation friction and efficient initial results that I experienced. However, I missed the greater control I was used to with twin brackets. Empower’s Dual Activation combines the best of both worlds giving me more efficient, accurate control on anterior teeth, coupled with the lower ligation friction benefits on passive posteriors.

In my experience, Empower’s Dual Activation provides:

• Reduced ligation friction throughout the system compared to twin brackets, allowing me to provide my patients more efficient and comfortable treatment.
• Earlier and increased torque control of incisors and canines.
• Better arch form development, buccal uprighting, and minimal wire bending in the posterior.
• Easier extension of treatment intervals, which not only gives wires time to work, but also pleases patients and parents.

The difference I have experienced compared to my previous all-passive approach is very impressive. Dual Activation allows me to more efficiently give my patients the great finish they deserve.

“Educate your patients about the advantages of Empower and Dual Activation. They will be pleasantly surprised with the comfort and beautiful finish.”

DR. TROY CHRISTENSEN: MY DUAL ACTIVATION

BRACKETS
EMPOWER 2 — ROTH COMPATIBLE U2-2, MCLAUGHLIN, BENNETT, TREVISI* ON REMAINDER OF TEETH

Interactive U/L 1-3, hooks on 3’s
Passive U/L 4, 5, hooks on 4, 5
if fit Molar Tubes U/L 6, 7

WIRE
VLP ARCH FORM

Initial Alignment and Leveling

.014 NT3 NiTi → .018 NT3 NiTi, both with Pre-Loaded Stops

Early Torque Control & Lateral Development

.020 x .020 NT3 NiTi

Finishing

.019 x .025 SS Upper
.016 x .025 SS Lower

MY TIPS

I don’t keep separate inventories of high or low torque brackets – if I need additional torque, I add it to the wire. Because Empower brackets express the torque built into the prescription, I switched from higher to lower positive torque values on upper 2-2 to avoid excessive labial crown torque.

Patience – I trust the prescription and my bracket positioning. I get to my .020 x .020 wire and leave it for 8-10 weeks.

I take a wax impression of the lower arch after the .020 x .020 wire. I coordinate both finishing wires to this arch form. I use a symmetry template to verify arch form accuracy and consistency and re-coordinate the finishing wires as needed.

*The American Orthodontics version of the McLaughlin, Bennett, Trevisi System does not claim to be a duplication of any other, nor does American Orthodontics imply that they are endorsed in any way by Drs. McLaughlin, Bennett, or Trevisi.
“I was amazed from the start with the positive changes Dual Activation brought and how much easier it was for me to finish my cases.”

DR. DAN BILLS

Dr. Dan Bills received his Bachelor of Arts degree in Biology from Lafayette College and his dental degree from Harvard University, both with Honors. He then completed a three-year orthodontic residency at the University of Illinois. Dr. Bills is a Board-Certified Diplomate of the American Board of Orthodontics, has held several positions in the American Dental Association, and is a Past-President of the Southern Dental Society of New Jersey. Dr. Bills is a published author and is on the Editorial Board of Orthodontic Practice magazine. He is a Clinical Associate in the University of Pennsylvania Department of Orthodontics, where he earned their 2011 Outstanding Teacher Award. He is also on staff in the Department of Dentistry at Virtua Hospital and was honored as Virtua’s Teacher of the Year in 2008. He speaks regularly on a variety of clinical topics as well as how to better utilize technology to connect with orthodontic patients.
My treatment philosophy is built on creating beautiful smiles and healthy bites in the most efficient way possible. This involves lateral arch development, differential arch forms, and a tremendous attention to detail during the finishing stages of treatment. The Empower Dual Activation System has allowed me to achieve all of these things in a more efficient and effective way than the popular passive self-ligating bracket system I had been using for the past decade. With this previous system, I found I had to work extremely hard with differential torque options and needed excessive detailing to finish these cases.

Dual Activation has allowed me to enjoy the benefits I have come to expect from a passive system, including rapid alignment and minimal friction, but with the added benefit of an easier and more predictable finish. I'm doing much less wire bending, and I find the system practically eliminates the need for differential torque brackets, which translates to a lower inventory and therefore a savings of both cost and time.

## BRACKETS

**EMPOWER 2 — ROTH COMPATIBLE U2-2, MCLAUGHLIN, BENNETT, TREVISI* ON REMAINDER OF TEETH**

<table>
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<tr>
<th>Wire</th>
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<td>Passive</td>
<td>U/L 4, 5, hooks on U4's and L4's &amp; 5's</td>
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<tr>
<td>*if</td>
<td>Molar Tubes 6's</td>
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<tr>
<td>**</td>
<td>Molar Tubes 7's</td>
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</tbody>
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## WIRE

**VLP ARCH FORM**

**Initial Alignment and Leveling**

- \(0.014\) **TANZO** to the 6's → \(0.018\) **TANZO** to the 7’s

**Early Torque Control & Lateral Development**

- \(0.020\) x \(0.020\) **TANZO**
  - *All TANZO and mid-force with pre-loaded stops*

**Finishing**

- \(0.019\) x \(0.025\) **SS** or Beta-Ti Upper
- \(0.016\) x \(0.025\) **SS** Lower

## MY TIPS

I no longer need differential torque brackets and my detailing is minimal, since the full prescription in the bracket is expressed at the end of treatment.

I utilize differential VLP arch forms in 3 different sizes (L, M, S), thus allowing me to utilize coordinating arch forms for the upper and lower during the lateral development and finishing stages of treatment. Because of this, I am able to avoid both the over-expansion of patients with smaller teeth and the creation of iatrogenic crossbites that are inherent with a one-size-fits-all wire philosophy.

I prefer higher negative torque upper molar tubes to counteract tipping forces generated during lateral development of the arch.

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“Dual Activation is an extremely reliable system I can count on to help me deliver a beautiful finish for my patients.”

DR. LAURA IRURZUN

After graduating from the University of Buenos Aires School of Dentistry, Dr. Laura Irurzun pursued a specialization in Orthodontics, a discipline she has practiced exclusively ever since. She served as President of the Orthodontic Commission at the Argentine Dental Association and is currently Tenured Ordinary Professor and Chairwoman of Orthodontics II and Professor of the Postgraduate Specialization Course at the University of Salvador School of Dentistry in Buenos Aires, Argentina. Dr. Irurzun is also Professor of Postgraduate Studies at both the Argentine Society of Orthodontics and the Argentine Dental Association. She has presented courses and has participated in numerous congresses, meetings, seminars, and other activities in Argentina and abroad.
DR. LAURA IRURZUN: MY DUAL ACTIVATION

I began using self ligating brackets over 15 years ago, utilizing several passive and interactive systems. I then made the switch to Empower and Dual Activation and have found the system really helps simplify my treatments. My patients find it comfortable and aesthetically pleasing, and the 3D control of the arches that it allows makes it extremely reliable. I have been very impressed with the quality results I have seen with this system.

What sets Dual Activation apart for me is the fact that it improves posterior sliding mechanics without losing torque control on the anterior teeth, which is necessary for achieving function, lip position, and a balanced smile. It’s also a very versatile system. In Class II cases or cases of severe space closure I will sometimes even use extra torque either added to the wire or in high torque brackets. I have also found that combining Dual Activation with Tanzo™ Premium Heat Activated Wire and Aarhus Mini Screws allows me to meet aesthetic and functional treatment goals in less time, and much more accurately.

WIRE

NATURAL ARCH FORM I

VLP ARCH FORM IN UPPER RPE CASES

Initial Alignment and Leveling

.014 TANZO (Low Force)

Early Torque Control & Lateral Development

.018 x .018 → .019 x .025 TANZO (Low Force)

Finishing

.019 x .025 Beta Ti → .019 x .025 SS

.018 x .025 SS Braided

(Plus Intermaxillary Elastics to Help Final Bite Settlement)

MY TIPS

The wire sequence will depend on the characteristics of each case.

The shape of the arch form depends on each patient. I coordinate the wires to the patient’s dental arch form and inter-canine distance.

Use metal ligatures on very rotated teeth.

Do not initiate square or rectangular wires until all rotations are corrected.

Make sure clips are tightly closed.

Start with Tanzo .018 x .018 or .017 x .025 for initial torque control. In Class II and severe closures of space, I use extra torque either through the wire or with high torque brackets.

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“Dual Activation requires minimal wire changes and treatment can be completed in fewer visits than with other systems.”

DR. N.R. KRISHNASWAMY

Dr. Krishnaswamy is a professor and Head of the Department of Orthodontics and the Vice Principal of Ragas Dental College & Hospital, Chennai, India. After graduating from the Madras Dental College, he obtained his Masters in Orthodontics from College of Dental Surgery, Manipal. He is a fellow of the Royal College of Surgeons of Edinburgh and a Diplomate of the Indian Board of Orthodontics and The National Board of Medical Sciences. Dr. Krishnaswamy was the recipient of the International Scientific exchange fund of the Japan Dental Association which led to clinical training at Tsurumi University, Yokohama, Japan. Dr. Krishnaswamy has served as the President of the Indian Orthodontic Society and the Chairman of the Indian Board of Orthodontics.
DR. N.R. KRISHNASWAMY: MY DUAL ACTIVATION

My decision to utilize Empower’s Dual Activation versus a fully interactive system really comes down to two things - better control and improved efficiency. The vast majority of cases in my market are extraction cases, so both are very critical to my patients’ successful treatment.

Control

Early in treatment, Dual Activation helps deliver low force and less friction throughout the arch to unravel crowding efficiently and without taxing the anchorage. Later in treatment, Dual Activation allows me to blend the advantages of lower ligation friction on the posterior teeth with the benefits of greater control on anteriors. The lower resistance to sliding that passive brackets deliver to posteriors is particularly advantageous during space closure and settling. At the same time, interactive brackets on anteriors provide excellent 3-dimensional control for uncompromised finishing.

Efficiency

Dual Activation allows me to use the same slot size without incorporating any third order bends or altering the cross-section of the wire, and lower ligation friction on the posteriors means I only need one set of arch wires for space closure. In the finishing stage, I can use a full size flexible wire to allow settling without the fear of losing tip and torque.

“Besides a great finish, Dual Activation gives me the luxury of time.”

BRACKETS

EMPOWER 2 — A ROTH* COMPATIBLE SYSTEM

Interactive U/L 3-3, hooks on 3’s
Passive U/L 4, 5, no hooks
Molar Tubes U/L 6, 7

WIRE

NATURAL ARCH FORM III

Initial Alignment and Leveling 0.014 or 0.016 Therma Ti (Depending on Crowding)
Continued Leveling 0.018 NT3 NiTi
Initial Torque Control 0.020 x 0.020 NT3 NiTi
Continued Torque Control and Retraction 0.019 x 0.025 SS
Finishing 0.021 x 0.025 Therma Ti

MY TIPS

In certain cases where I need additional settling, I will use a 0.016 NiTi prior to my finishing wire.
If needed, I reposition brackets after the 0.019 x 0.025 stainless steel wire.

*The American Orthodontics version of the Roth System does not claim to be a duplication of any other, nor does American Orthodontics imply that they are endorsed in any way by Dr. Roth.
SYSTEM FEATURES AND BENEFITS
American Orthodontics pioneered the Dual Activation system with the introduction of Empower Self Ligating Brackets. Utilizing Empower and Dual Activation delivers the time-saving benefits and ease of self ligation, while allowing you to treat your patients your way using the best of both interactive and passive systems.

- Minimized ligation forces throughout the system
- Interactive brackets on anterior teeth for full control and a precise finish
- Passive brackets on posterior teeth for improved freedom play
- Matching in/outs between interactive and passive designs means no 1st order wire bending compensations

PRESCRIPTION CHOICES*
- McLaughlin, Bennett, Trevisi
- Roth Compatible
- Modified Damon
- Roncone
- Gianelly V-Slot
- Additional Torque Choices

BRACKET OPTIONS
- Four premolar pad choices
- Optional, integrated hooks on laterals, cuspsids, and premolars
- Two molar pad choices

WIRE CHOICES
- TANZO Premium heat activated
- TriTitanium multi-force heat activated NiTi
- NT3 Superelastic NiTi
- Beta Titanium
- Stainless Steel

*American Orthodontics' prescription versions. No endorsement by the doctor(s) is implied.

WHAT’S YOUR DUAL ACTIVATION?
Take the various options available with Empower’s Dual Activation and make the system your own. Extensive prescription, wire, hook, pad and wire options allow you to develop a system unique to your treatment style.

FOR MORE INFO VISIT:
AMERICANORTHO.COM/DUALACTIVATION