

PowerScope™

class II corrector

**Delivering Unmatched
Patient Comfort**



Why Choose The PowerScope Class II Appliance



With over ten years of proven clinical success, advanced features and benefits, and best-in-class sales support, PowerScope offers an easy, efficient, and dependable approach to Class II correction.

- Fixed one-piece, one-size-fits-all design
- Easy chairside wire-to-wire installation
- No lab setup required
- No headgear or special band assemblies
- Use with banded or bondable molar tubes
- World-class clinical results



Quick Installation

PowerScope is a chairside, ready-to-install solution that eliminates the need for lab setup or bands, allowing for fast, efficient placement in a single appointment. The closed-channel nut allows the appliance to be placed directly on the archwire before ligation, streamlining attachment of the PowerScope arm, especially in difficult posterior areas.



Patient Compliance

The fixed, wire-to-wire telescoping design combined with an advanced nickel-titanium spring requires no patient involvement. Once placed and activated, PowerScope provides continuous, consistent performance throughout treatment.

Product Features

Innovative Design

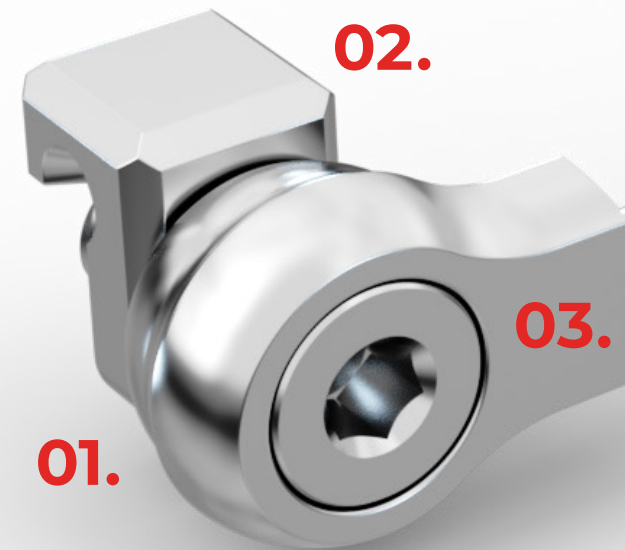
PowerScope delivers dependable Class II correction with exceptional comfort and simplicity. This convenient, chairside-ready solution requires no lab setup, enabling faster installation and more efficient appointments.

- 01. Patient-Friendly Design**
PowerScope's low-profile design and smooth, rounded form enhances patient comfort and is intended to help reduce the risk of ulceration, as no piston extends distally from the upper molars
- 02. Ready to Use**
PowerScope is a one-piece appliance, with no need for lab setup
- 03. Hex Thread Screws**
Designed with reverse screw thread assembly to minimize screw loosening during treatment
- 04. Activation Lines**
Three distinct lines provide a clear visual reference to aid in activation of the appliance
- 05. 18mm Telescoping Mechanism**
Durable, proven telescoping engineering is designed to remain engaged during treatment, helping reduce the need for emergency visits
- 06. Wire Attachment Nuts**
Simple wire-to-wire installation reduces the need for special band attachments or headgear tubes
- 07. Ball and Socket Joint**
The innovative design of PowerScope allows greater lateral movement, enhancing overall comfort and boosting patient acceptance
- 08. Nickel Titanium**
The internal Nickel Titanium spring mechanism provides up to 260 grams of force when activated



Two Attachment Nut Options

- Fully enclosed, requiring wire to be threaded through prior to installation
- Three-sided, allowing for attachment on a pre-existing wire, where the screw is the "fourth wall"



04.

06.

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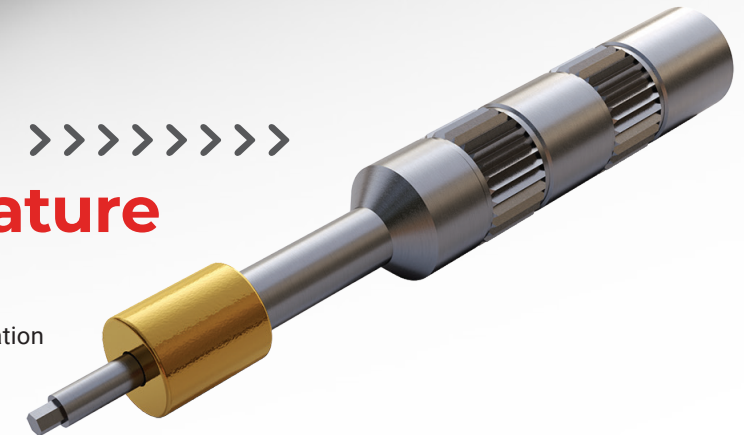
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Magnetic Feature

Magnetic sleeve slides onto driver for secure hold of appliance during installation



Testing & Evaluation



Consistent Activated Forces

The internal NiTi spring mechanism delivers a consistent, reliable level of force throughout treatment. When activated with crimpable shims and guided by three easy-to-read visual indicators, the appliance can generate up to 260 grams of force.

force (fg)

300

250

200

150

100

50

0

PowerScope

Company A

Company B

Comparison of Spring Forces Exerted During Activation

force (fg)

300

250

200

150

100

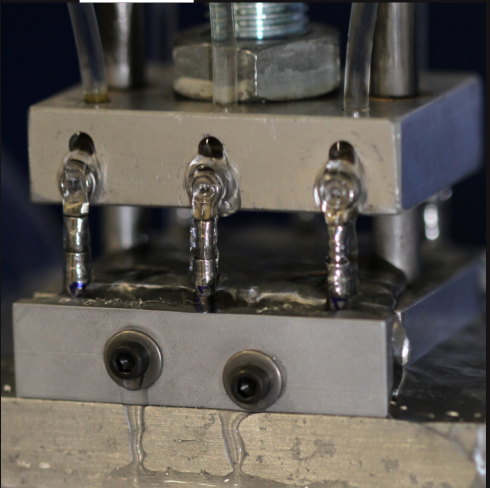
50

0

Pre Testing

4,000,000 Cycles

Consistent Force Values After 4 Million Cycles



In-House Cycle Testing

American Orthodontics tested PowerScope to more than four million cycles. That's equal to opening and closing your mouth once every six seconds, every minute you're awake, for over a year.

Meet Our Professionals



Dr. Andy Hayes - St. Louis, MO

Andy Hayes, MSD, DDS, is a second generation orthodontist known internationally for his clinical expertise and his innovative contributions to Class II corrective therapy. In partnership with American Orthodontics, Dr. Hayes co developed PowerScope, an intermaxillary Class II corrector designed to provide simplified installation, improved patient comfort, and a highly efficient range of motion for noncompliant cases. His role in developing PowerScope has also extended into broader research and clinical refinement of PowerScope applications, further enhancing treatment predictability and functional biomechanics.

Dr. Hayes received his MSD, DDS, and BS from Indiana University, where he also completed his orthodontic specialty training. Recognized for his interests in growth modification for adolescents, skeletal anchorage in complex orthodontic cases, and aesthetic, non-visible treatment options, he continues to advance modern orthodontic approaches through both clinical practice and innovation. A respected educator, Dr. Hayes serves as a Clinical Instructor in the Department of Orthodontics at St. Louis University. He lectures nationally and internationally on Class II correction mechanics and has authored multiple articles on the subject. Dr. Hayes is also listed as the inventor on multiple international orthodontic patent applications, reflecting his ongoing commitment to improving orthodontic treatment modalities.



Dr. Graham Jones - Monroe, WA

Graham Jones, MSD, DDS, is a board certified orthodontist recognized for his contributions to clinical research, advanced imaging techniques, and the development of modern orthodontic



appliance therapy. He graduated Magna Cum Laude from Simpson University with a Bachelor of Arts in Liberal Studies before earning his DDS from the University of California, San Francisco. He later completed his Master of Science in Dentistry and Orthodontics Certificate at St.

Louis University, where he deepened his focus on emerging orthodontic technologies, appliance design, and evidence based biomechanics.

Dr. Jones's work also intersects with American Orthodontics product development and clinical evaluation. As a contributing author in Orthotown, he has written on treatment philosophy and the clinical advantages of the PowerScope Class II Corrector, offering insight into its biomechanics, patient centered design, and application in both symmetric and asymmetric Class II cases. His commentary on PowerScope's line of action, installation efficiency, and comfort has helped shape its understanding within the orthodontic community.

Dr. Alexandre Moro - São Paulo, Brazil

Alexandre Moro, PhD, DDS, MS, is a leading international expert in fixed functional appliances and lingual orthodontics. He earned his dental, master's, and doctoral degrees in Brazil, completing his PhD at the prestigious Bauru Dental School with published research on the Herbst appliance. A respected



educator, Dr. Moro has taught at the Federal University of Paraná and currently lectures globally on Class II correction and lingual orthodontic systems. He maintains an orthodontics-only practice in Curitiba and is a prolific lecturer, delivering presentations across Brazil and internationally on topics including Class II correction, complications in functional appliance therapy, and the evolution of lingual orthodontics.

Dr. Moro proudly partners with American Orthodontics, collaborating to advance innovative solutions in orthodontic treatment and education worldwide. His work emphasizes evidence-based approaches and continuous development of clinical techniques to improve patient outcomes.



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Orthodontist Clinical Perspectives

CLINICAL INDICATORS

- Class II Patients in the permanent dentition with position overbite
- Class II occlusion with expected favorable mandibular growth and/or the ability to undergo some dental compensation
- Normal to low mandibular plane angles and do not have severe lower incisor proclination
- Anchorage for cases of extractions to enhance the mesial movement of lower molars

CONTRAINDICATORS

- Severely proclined lower incisors or lower anterior recession
- Very thin lower anterior tissue biotype (monitored closely)
- Lack of overbite
- Open bite
- Lower proclined incisors with limited future growth of the mandible expected
- Upper premolar extraction cases
- Patients with periodontal issues



Clinical Indicators, Contraindicators, Clinical Tips and Suggestions in the following pages are the expressed findings by Dr. Andy Hayes, Dr. Graham Jones, & Dr. Alexandre Moro.

Treatment Overview

Installation

PowerScope can be placed once all teeth are bonded and the arches are leveled sufficiently to accommodate a stainless steel wire with a 0.025" cross section. Installation on any wire other than stainless steel may introduce too much flexibility, increasing the risk of wire fracture and compromising maintenance of the arch form.

- **0.016 x 0.025**
- **0.017 x 0.025**
- **0.019 x 0.025**

Clinical Tips:

- For increased play in the upper arch and decreased play in the lower, using two different size wires is an option.
Example: .016 x .025 upper and .017 x .025 lower
- PowerScope can be very helpful as an anchorage for Class II space closing

Placement

PowerScope is placed mesial to the first molar on the upper arch and distal to the canine on the lower. The design is meant for PowerScope to 'hang' below the arch wires.



Attachment Nut Options

- **Open Channel:** The three-sided nut design does not require the wire to be removed at installation. This option is necessary in situations where the arch wire has posterior bends or when sliding the nut onto the wire is not feasible.
- **Closed Channel:** The four-sided nut design is less technique sensitive, as nut slides on wire prior to ligating.



Clinical Tips:

- Tighten screws by turning distally, loosen screws by turning mesially – no matter what side you are on.

Treatment Overview

Activation >>>>>>>>

- Have patient bite into maximum intercuspation.
- Ensure nuts are distal as possible in the upper arch and as mesial as possible in the lower.
- Expose laser scribed visual indicators by pulling back on the middle tube. Add crimpable shims accordingly. There is approximately 5 mm of space between No Activation and Full Activation indicators.
- After placing shims, repeat the process by having the patient bite into maximum intercuspation to ensure the spring is fully activated.
- It is important to not over-activate to the point of repositioning the mandible.

Re-Activation

- Every 4-6 weeks re-activate the PowerScope by adding crimpable shims.



Clinical Tips:

- Clinicians typically observe 1 mm of movement every 4 weeks
- Continue to add shims regularly to keep the spring at full activation.

Mitigating Side Effects

Prevent axial inclination of lower anterior teeth or the opening of space distal to the canines by:

- Using MBT (-6T) brackets on the lower incisors
- Cinching or tying back of the lower arch wire
- Using an elastic chain on the full lower arch
- Using arch locks/stops posteriorly



Clinical Tips:

- If the mandible has not been protruded, there should be no need for overcorrection.
- To maintain correction, posterior interdigitation is important.
- Wearing light Class II elastics at night will help maintain correction in most cases.

Clinical Tips:

- Maintaining an overbite is the best way to minimize proclination. Do not strive for that edge to edge or underbite relation as you would with a typical fixed functional appliance. If the overbite is lost, the lower incisors will be free to tip labially.
- Crimpable hooks with a steel lace or power chain between lower premolars to lower first molars works well for a tie back.
- IPR can be used if overjet and proclination become a problem.

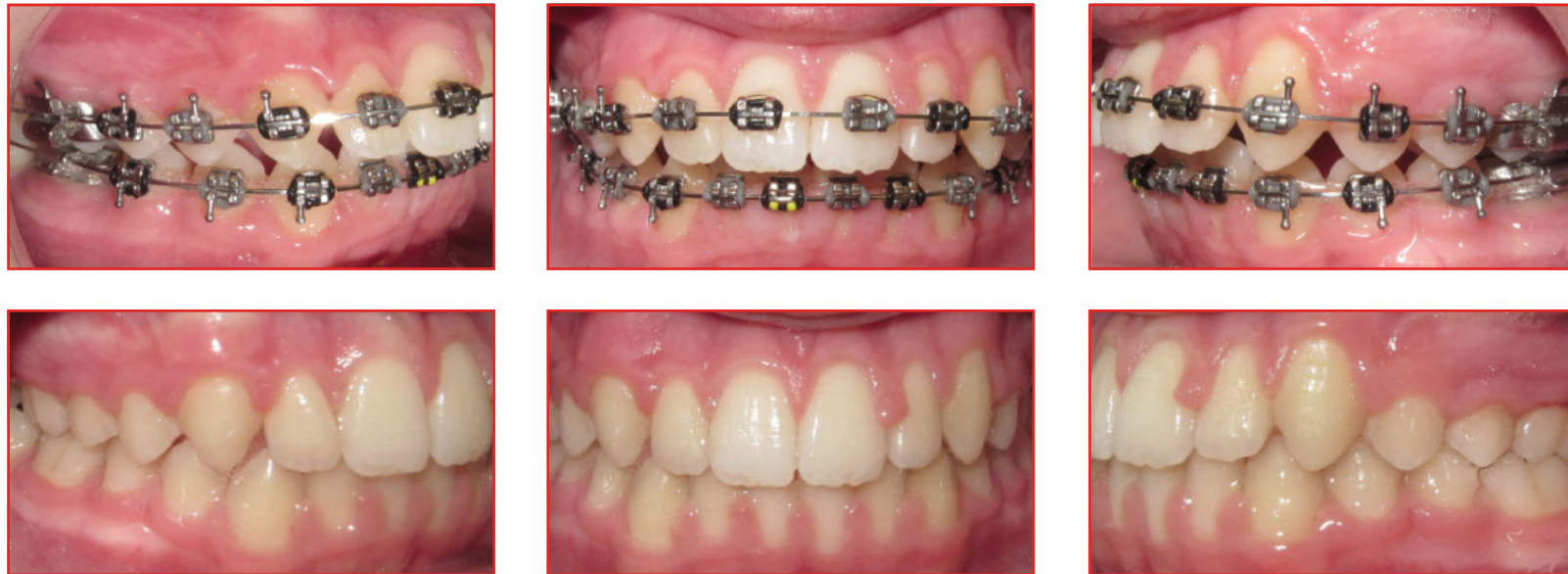
Removal

When the patient achieves ideal Class I occlusion for molars, premolars and canines, remove the appliance.



Case 1 Results

Class II to Class I with 4 months of PowerScope treatment.



Case 2 Results

Class II to Class I with 5 months of PowerScope treatment.



Case Studies

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Additional Clinical Tips

- PowerScope works well for unilateral cases by placing only on the Class II side. A non-activated appliance can be placed on the Class I side to help maintain the occlusal plane and guide mandibular closure.
- Over-activation may introduce vertical forces and associated side effects like occlusal canting and arch bowing.
- Steel tie convertible tubes on upper first molars to discourage inadvertent conversion.
- Avoid using power chain or cinching back the upper wire before the upper molar is in a fully seated Class I. This will stop the distal forces that cause distal tipping and rotation of the upper molars which assists in correcting the Class II. Once upper molars are fully seated in Class I, chain the upper arch back using your PowerScope as anchorage.
- Lower arch space closing can be done in conjunction with PowerScope. Place a crimpable arch hook mesial to the lower canine rather than the traditional elastic chain placed on the archwire and around the brackets. After installation, run an elastic chain from the crimpable hook gingivally around the attachment to the lower molar hook. The anterior force of the PowerScope spring placed on the lower canine can maintain anchorage as posterior spaces are closed.
- The PowerScope is designed as a distalizing appliance only. Using the PowerScope as a mandibular advancement appliance would be considered off-label.



For more information including installation videos visit [YouTube.com/@americanorthodonticsusa](https://www.youtube.com/@americanorthodonticsusa)



Components

852-016538 - 5 Patient Kit:

- 5 Right / 5 Left Telescoping Arms
- 10 Right / 10 Left Open Channel Nuts
- 10 Right / 10 Left Closed Channel Nuts
- 10 each - 1mm / 2mm / 3mm Crimpable Shims
- 1 Hex Head Driver with 5 Single Use Driver Magnets

852-016537 – 1 Patient Kit:

- 1 Right / 1 Left Telescoping Arms with Open Channel Nuts attached

852-016539 – PowerScope Right Arm with Open Channel Nuts attached

852-016540 – PowerScope Left Arm with Open Channel Nuts attached

852-016541 – Open Channel Nuts 10/pk (5 Right and 5 Left)

852-030576 – Closed Channel Nuts 10/pk (5 Right and 5 Left)

855-733 – 1mm Crimpable Shims (10/pk)

855-728 – 2mm Crimpable Shims (10/pk)

855-738 – 3mm Crimpable Shims (10/pk)

855-515 – Hex Head Driver

852-026533 – PowerScope Driver Magnets (5/pk)



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