

AUTOMATICALLY  
ADJUSTS FIRING  
SPEED IN REAL TIME.<sup>1-3</sup>  
**AND TELLS YOU  
WHEN IT DOES.**



The world's first smart  
stapler gives you  
real-time feedback in  
the palm of your hand



Signia™ stapler  
featuring Adaptive Firing™  
technology



# REAL-TIME FEEDBACK YOU CAN SEE AND HEAR.

We're giving you a tool that delivers consistent staple lines.<sup>1,2</sup> Because the Signia™ stapler features sensing technology that displays real-time feedback before you fire — and automatically adjusts firing speed to optimize staple formation.<sup>1,2,4</sup>

We call it Adaptive Firing™ technology.

To try the Signia™ stapling system in your next procedure, contact your local Medtronic sales representative or visit [medtronic.com/covidien](http://medtronic.com/covidien).

1. Based on internal test report #R2146-151-0, Powered Stapling Firing Speed DOE Analysis and ASA Parameters, 2015.
2. Based on internal test report #R2146-173-0, ASA Verification Testing with Slow Speed Force Limit Evaluation, 2015.
3. Based on Engineering Report #PCG022, Comparison of the iDrive™-S, iDrive™-F, Ethicon 60 and universal 60 Staple Formation in Thick Tissue Stomach Firings; January, 2016.
4. Based on test report #RE00024826, Signia™ stapling system summative usability report, January 2016.
5. Based on Engineering Report #R2146-560-0, iDrive™ Ultra Compared to Signia™ Handle; January, 2016.
6. PT00002451 Signia™ Stapler User Manual, Page 13.

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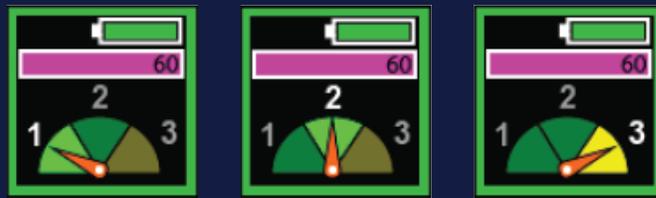
## Force measurements

The Signia™ stapler measures the force to clamp and fire the stapler.<sup>1-4</sup> Here's how it works:

- Three zones were developed based on force measurements in variable tissue thicknesses
- Firing speeds were programmed for each zone — to optimize staple formation<sup>1-4</sup>
- Higher force measurements indicate thicker tissues, more challenging tissue conditions, additional material in the jaws, or maximum device articulation<sup>5</sup>

## Visual & audible feedback

Our smart technology facilitates communication between the stapler and Tri-Staple™ 2.0 reloads, cartridges and Signia™ loading units. It displays feedback on an OLED screen on the handle — before and during firing. And there's a color-coded force dial featuring three zones:



Zone 1 indicates the stapler will start firing at its regular speed to deliver optimal staple formation<sup>6</sup>

Zone 2 indicates the stapler will require a higher firing force due to thicker or variable tissue and the device will slow its speed to deliver optimal staple formation<sup>6</sup>

Zone 3 indicates the stapler will require the highest firing force due to very thick or variable tissue and the device will adjust to its slowest speed to deliver optimal staple formation<sup>6</sup>

## Automatic firing speed adjustments

The Signia™ stapler utilizes force sensing technology to adjust firing speeds to optimize staple formation when stapling in different and variable tissue thicknesses,<sup>1,2,4</sup> and:

- Sets the initial firing speed based on the clamp force measurement
- Continually measures force when firing
- Stops firing if force reaches the mechanical limits of the system

**Medtronic**