



OPTIMIZING COMFORT ERGONOMICS IN SPRAY GUN DESIGN



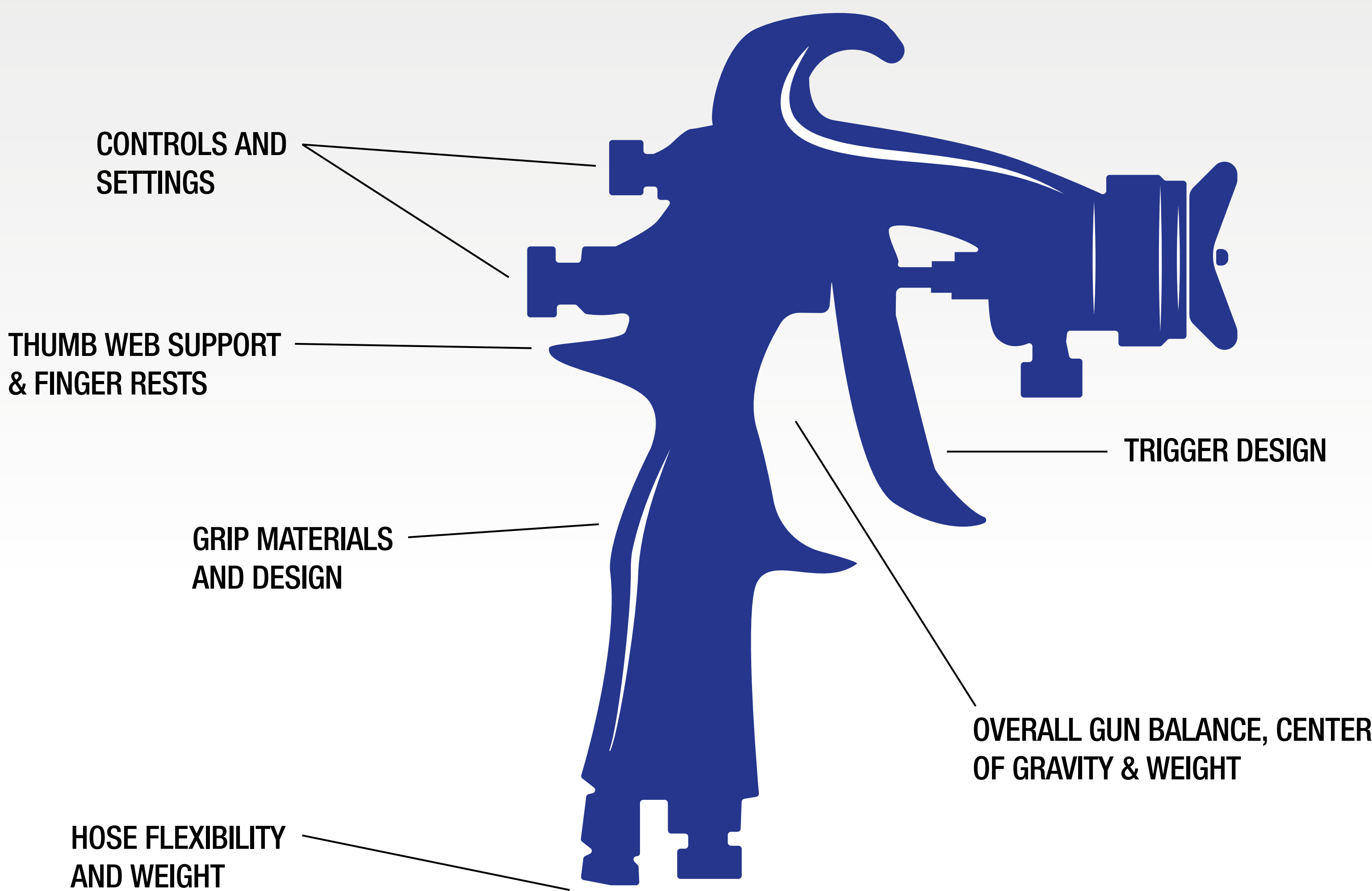
Painting often comes at a physical cost. Repetitive motions, extended tool use, and awkward postures put strain on the wrist, arm, and shoulder. Over time, this can lead to discomfort, pain, and long-term injuries, affecting a painter's ability to work efficiently.

OPTIMAL SPRAY GUN DESIGN

US Ergonomics conducted in-depth research with one singular goal: to create a spray gun that empowers industrial painters. The new Stellair air spray guns provide industrial painters with the ergonomics, serviceability and performance they need to enjoy and excel at their jobs.

1. PINPOINT ESSENTIAL FEATURES

Research and analysis identified key factors that impact ergonomic performance.

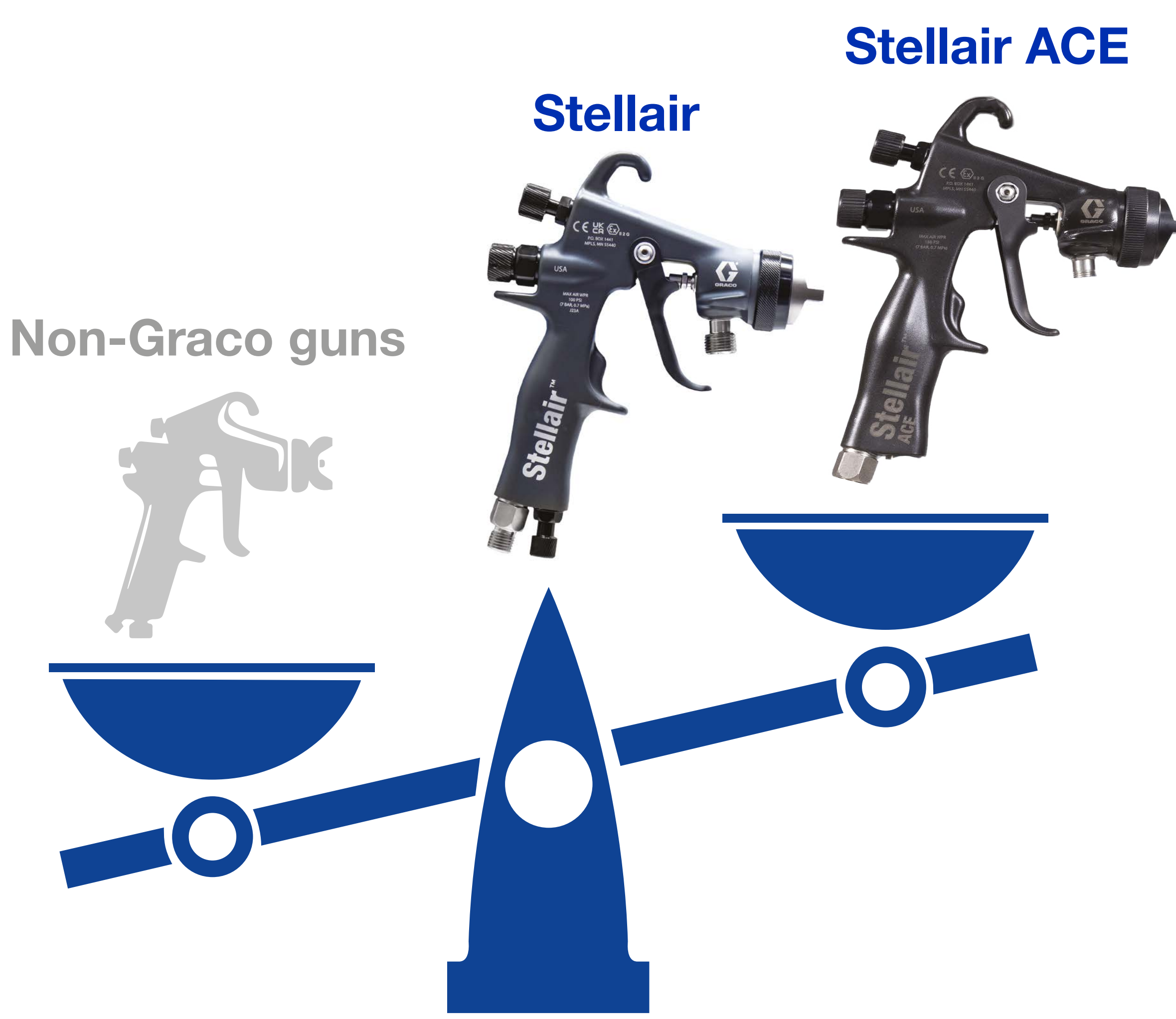


A well-balanced, lightweight spray gun with an ergonomic grip and low trigger force reduces muscle strain, hand fatigue, and the risk of injuries, while improving control, comfort, and efficiency during extended spray painting tasks.

2. PRIORITIZE ERGONOMICS

After incorporating ergonomic essentials into new air spray gun designs, Graco asked United States Ergonomics to test the Stellair and Stellair ACE prototypes. They earned higher comfort ratings than comparable industrial air spray guns.

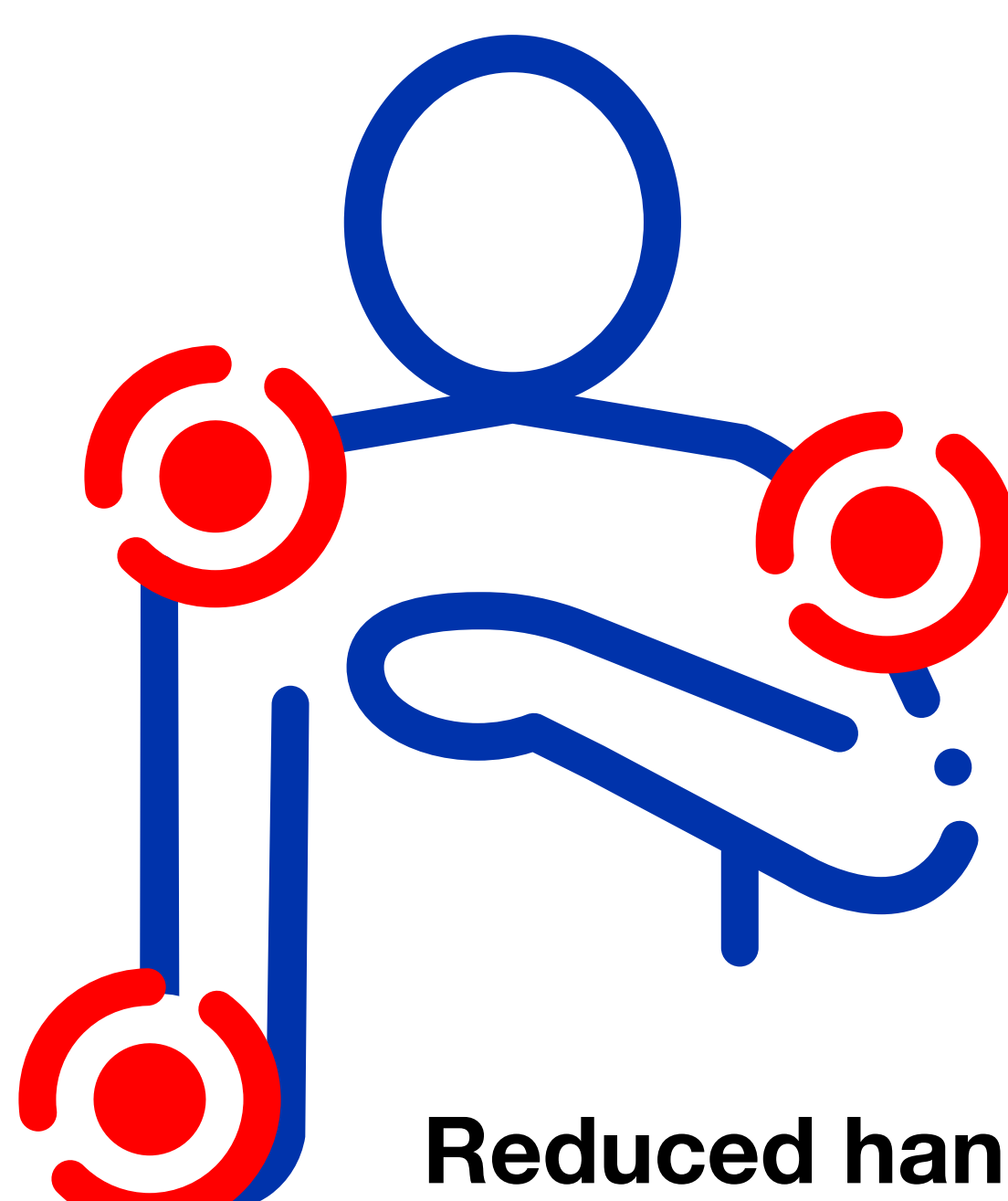
Made of carbon reinforced polymer, Stellair ACE weighs 7.4 ounces (209 grams) up to **50 percent lighter** than almost any other manual pressure feed applicator.



3. MEASURE THE IMPROVEMENTS

Before Graco introduced Stellair and Stellair ACE to the market, US Ergonomics tested the improvements with 12 experienced industrial painters. Electromyography (EMG) measurements and anthropometric data demonstrated low muscle exertion and high comfort. Such results qualified the air spray guns to become the first industrial paint sprayers to earn Ergonomics Performance Certification.

Reduced shoulder effort
-11% with Stellair
-13% with Stellair ACE



Reduced upper arm muscle effort
-15% with Stellair
-19% with Stellair ACE

Reduced hand and forearm muscle effort
-18% with Stellair
-25% with Stellair ACE