

humotech

Caplex EXO-010

The EXO-010 is a modular tethered ankle exoskeleton capable of providing either plantarflexion or dorsiflexion assistance. Designed for diverse usability, the EXO-010 is adjustable with interchangeable Humotech sneakers to accommodate a wide range of shoe sizes (US Men's 5-12) as well as a shank height mechanism for users of all heights.



sales@humotech.com | 412.301.5083

PROPERTY	SPECIFICATION												
Active degree of freedom	Forefoot actuated by cable												
Force sensor	Inline load cell for forefoot torque applied, accurate within +/- 1%												
Angle sensor	Quadrature encoder with 4096 cycles per revolution												
Maximum torque	Plantarflexion: 100 Nm (cable) Dorsiflexion: 50 Nm (cable) (or elastic bands)												
Range of motion	Plantarflexion: 45 degrees max Dorsiflexion: 33 degrees max												
Device Weight (without tether)	2.5 kg (5.5 lb) including shoe												
Shoe size	Usable for US Men's sizes 5-12 Note: To embed attachment hardware shoe midsole thickness is increase by 20 mm compared to typical shoes												
Device dimensions	<table border="0"> <tr> <td>Nominal Width (Calf Interior)</td> <td>5.8 inches</td> </tr> <tr> <td>Nominal Width (Calf Exterior)</td> <td>8.0 inches</td> </tr> <tr> <td>Nominal Width (Ankle Interior)</td> <td>3.7 inches</td> </tr> <tr> <td>Nominal Width (Ankle Exterior)</td> <td>7.3 inches</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>Ankle to Strap Height</td> <td>15.5 inches (max)</td> </tr> </table>	Nominal Width (Calf Interior)	5.8 inches	Nominal Width (Calf Exterior)	8.0 inches	Nominal Width (Ankle Interior)	3.7 inches	Nominal Width (Ankle Exterior)	7.3 inches			Ankle to Strap Height	15.5 inches (max)
Nominal Width (Calf Interior)	5.8 inches												
Nominal Width (Calf Exterior)	8.0 inches												
Nominal Width (Ankle Interior)	3.7 inches												
Nominal Width (Ankle Exterior)	7.3 inches												
Ankle to Strap Height	15.5 inches (max)												

Caplex EXO-010

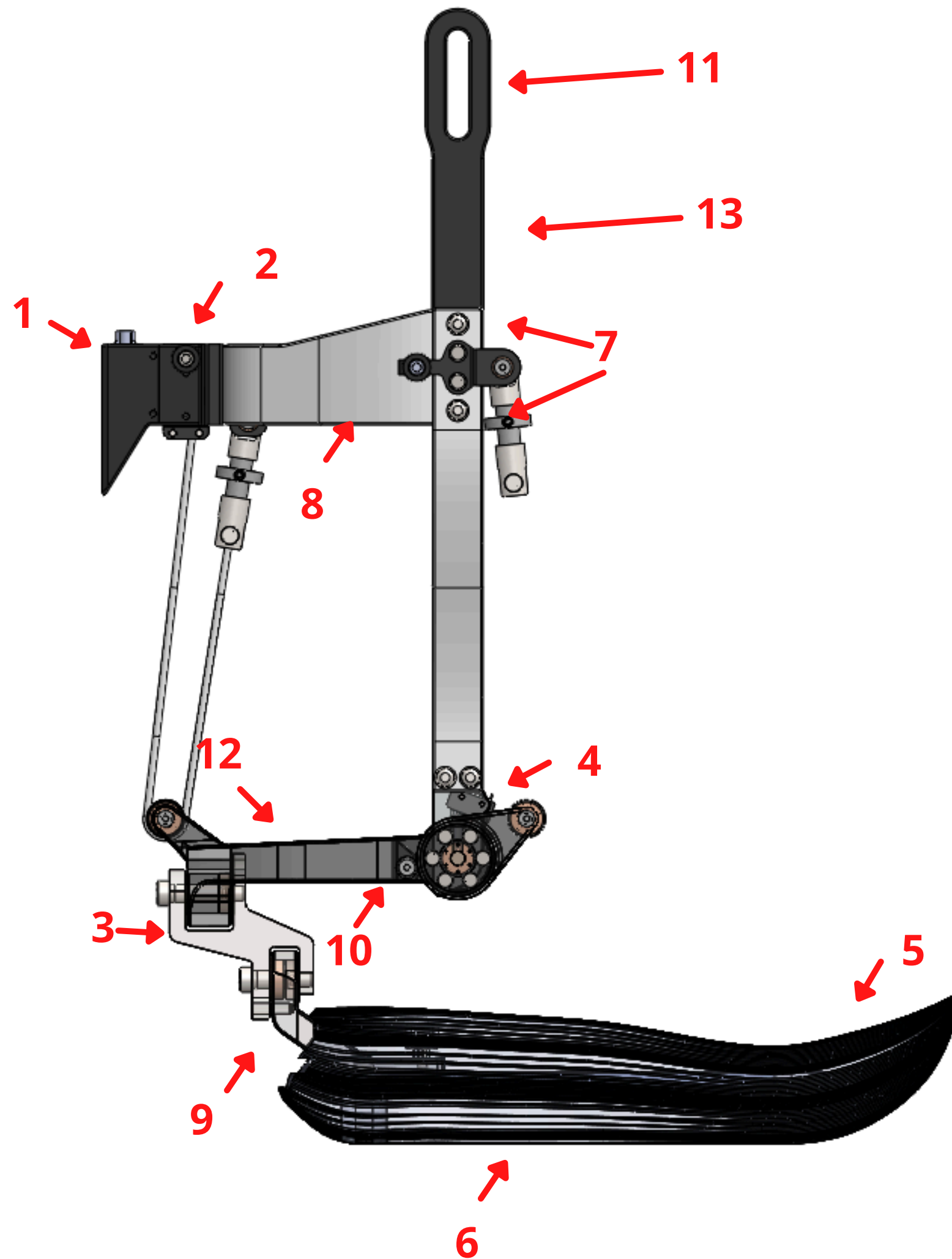
Technical Specifications

- ★ High torque density: high peak ankle plantarflexion torque output (100 Nm)
- ★ Highly adjustable design to accommodate users of varying foot length (5-12 US Men's / 6.5-13.5 US Women's) and heights
- ★ Custom shoe design integrates and conceals mounting hardware while providing comfortable interface for user.
- ★ Optional passive degree of freedom in frontal plane. Can also be restricted to purely sagittal motion.
- ★ Optional accessories available for dorsiflexion loading of the ankle.
- ★ Compatible with Full-Sized and Portable Caplex Systems

Features



- 1) Electrical Interface
- 2) Bowden Cable Termination
- 3) Modular ankle connector
- 4) Limit Switch
- 5) Custom Shoe (swappable)
- 6) Midsole spring (swappable inside of midsole)



- 7) Modular Shank Mounting Screws
- 8) Bowden lever
- 9) Shoe Bracket
- 10) Modular Hardstop
- 11) Modular Strap Mounting
- 12) Rear Ankle Lever
- 13) Shaft

