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Caplex EXO-01

The EXO-001 is a tethered high-torque ankle exoskeleton with high plantarflexion torque output relative to our EXO-005 device. Designed for diverse usability, the EXO-001 is adjustable with interchangeable sneakers and forefoot struts to accommodate a wide range of shoe sizes (US Men's 4-14). Other versions include a narrowed variation (EXO001C04) with moderate torque output and a shortened revision (EXO001A05)





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PROPERTY

SPECIFICATION

Active degree of freedom Forefoot actuated by cable

Force sensor Inline load cell for forefoot torque applied, accurate within +/- 1%

Angle sensor Optical encoder for forefoot angle with 5000 counts per revolution

Maximum torque Plantarflexion: 180 Nm (cable)

Dorsiflexion: 1.5 Nm (elastic bands)

Range of motion Plantarflexion: 45 degrees

Dorsiflexion: 30 degrees

Device Weight (without tether) 1.4 kg (3.1 lb) standard, including size 10 shoe, Strut C

1.3 kg (2.9 lb) narrowed, including size 10.5 shoe, Strut B

Shoe size US size 14 M / 15.5 W Strut A - fits 12.5 to 14 M / 14 to 15.5 W

US size 12 M / 13.5 W Strut B - fits 10.5 to 12 M / 12 to 13.5 W

US size 10 M / 11.5 W Strut C - fits 8.5 to 10 M / 10 to 11.5 W US size 8 M / 9.5 W Strut D - fits 6.5 to 8 M / 7 to 9.5 W

US size 4 M / 5.5 W Strut F - fits 2.5 to 4 M / 4 to 5.5 W

Device dimensions Standard length Strut A - 36.8 cm (14.5 in)

US size 6 M / 7.5 W

(heel rod to toe plate) Strut B - 34.3 cm (13.5 in)

Strut C - 32.4 cm (12.75 in)

Strut E - fits 4.5 to 6 M / 6 to 7.5 W

Strut D - 31.1 cm (12.25 in) Strut E - 29.8 cm (11.75 in)

Strut F - 28.6 cm (11.25 in)

Standard width 19.4 cm (7.64 in.)

Narrowed width 18.3 cm (7.20 in.)

Standard overall height 41.4 cm (16.3 in.) Shortened overall height 37.3 cm (14.67 in)

Caplex EXO-01

Technical Specifications



PROPERTY

SPECIFICATION

Active degree of freedom Forefoot actuated by cable

Force sensor Inline load cell for forefoot torque applied, accurate within +/- 1%

Angle sensor Optical encoder for forefoot angle with 5000 counts per revolution

Maximum torque Plantarflexion: 65 Nm (cable)

Dorsiflexion: 1.5 Nm (elastic bands)

Range of motion Plantarflexion: 45, 35, 20 degrees

Dorsiflexion: 30 degrees

Device Weight (without tether)

1.4 kg (3.1 lb) standard, including size 10 shoe, Strut C

1.3 kg (2.9 lb) narrowed, including size 10.5 shoe, Strut B

Shoe size US size 14 M / 15.5 W Strut A - fits 12.5 to 14 M / 14 to 15.5 W

US size 12 M / 13.5 W Strut B - fits 10.5 to 12 M / 12 to 13.5 W US size 10 M / 11.5 W Strut C - fits 8.5 to 10 M / 10 to 11.5 W

US size 8 M / 9.5 W Strut D - fits 6.5 to 8 M / 7 to 9.5 W US size 6 M / 7.5 W Strut E - fits 4.5 to 6 M / 6 to 7.5 W

US size 4 M / 5.5 W Strut F - fits 2.5 to 4 M / 4 to 5.5 W

Device dimensions Standard length Strut A - 36.8 cm (14.5 in)

(heel rod to toe plate) Strut B - 34.3 cm (13.5 in)

Strut C - 32.4 cm (12.75 in) Strut D - 31.1 cm (12.25 in)

Strut E - 29.8 cm (11.75 in)

Strut F - 28.6 cm (11.25 in)

Child width 19.4 cm (7.64 in.)

Standard overall height 41.4 cm (16.3 in.)

Caplex EXO-01 (child)

Technical Specifications



- Best-in-class torque density: very high peak ankle plantarflexion torque output (180 Nm) in a lightweight package (1.5 kg)
- Highly adjustable design to accommodate users of varying foot length (2.5-14 US Men's / 4-15.5 US Women's)
- Carefully designed shoe integration and strapping ensure durability and comfortable user experieince even over long testing periods
- Tried-and-true robust design developed over 12+ years of walking and running studies
- Compatible with Full-Sized and Portable Caplex Systems
- Narrowed and shorted variations available to accommodate users with shorter shanks and/or narrower step widths

Features







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Features



