

humotech

# Caplex EXO-001

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 shoes and forefoot struts to accommodate a wide range of shoe sizes (US Men's 4-14 / US Women's 5.5-15.5 / EU 35.5-48.5). Other versions include a narrowed variation (EXO001C04) with moderate torque output and a child sized version (EXO001F05) or adapter kit for existing EXO001 devices.

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	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 M shoe 1.3 kg (2.9 lb) narrowed, including size 10.5 M shoe																				
Shoe size	US size 4 M / 5.5 W / 35.5 EU to US size 14 M / 15.5 W / 48 EU																				
Device dimensions	<table border="0"> <tr> <td>Standard length</td> <td>12.5 to 14 M / 14 to 15.5 W / 46.5 to 48 EU - 36.8 cm (14.5 in)</td> </tr> <tr> <td>(heel rod to toe plate)</td> <td>10.5 to 12 M / 12 to 13.5 W / 44 to 46 EU - 34.3 cm (13.5 in)</td> </tr> <tr> <td></td> <td>8.5 to 10 M / 10 to 11.5 W / 41.5 to 43.5 EU - 32.4 cm (12.75 in)</td> </tr> <tr> <td></td> <td>6.5 to 8 M / 7 to 9.5 W / 39 to 42.5 EU - 31.1 cm (12.25 in)</td> </tr> <tr> <td></td> <td>4.5 to 6 M / 6 to 7.5 W / 36.5 to 40 EU - 29.8 cm (11.75 in)</td> </tr> <tr> <td></td> <td>2.5 to 4 M / 4 to 5.5 W / 35 to 36.5 EU - 28.6 cm (11.25 in)</td> </tr> <tr> <td>Standard width</td> <td>19.4 cm (7.64 in.)</td> </tr> <tr> <td>Narrowed width</td> <td>18.3 cm (7.20 in.)</td> </tr> <tr> <td>Standard overall height</td> <td>41.4 cm (16.3 in.)</td> </tr> <tr> <td>Shortened overall height</td> <td>37.3 cm (14.67 in)</td> </tr> </table>	Standard length	12.5 to 14 M / 14 to 15.5 W / 46.5 to 48 EU - 36.8 cm (14.5 in)	(heel rod to toe plate)	10.5 to 12 M / 12 to 13.5 W / 44 to 46 EU - 34.3 cm (13.5 in)		8.5 to 10 M / 10 to 11.5 W / 41.5 to 43.5 EU - 32.4 cm (12.75 in)		6.5 to 8 M / 7 to 9.5 W / 39 to 42.5 EU - 31.1 cm (12.25 in)		4.5 to 6 M / 6 to 7.5 W / 36.5 to 40 EU - 29.8 cm (11.75 in)		2.5 to 4 M / 4 to 5.5 W / 35 to 36.5 EU - 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)
Standard length	12.5 to 14 M / 14 to 15.5 W / 46.5 to 48 EU - 36.8 cm (14.5 in)																				
(heel rod to toe plate)	10.5 to 12 M / 12 to 13.5 W / 44 to 46 EU - 34.3 cm (13.5 in)																				
	8.5 to 10 M / 10 to 11.5 W / 41.5 to 43.5 EU - 32.4 cm (12.75 in)																				
	6.5 to 8 M / 7 to 9.5 W / 39 to 42.5 EU - 31.1 cm (12.25 in)																				
	4.5 to 6 M / 6 to 7.5 W / 36.5 to 40 EU - 29.8 cm (11.75 in)																				
	2.5 to 4 M / 4 to 5.5 W / 35 to 36.5 EU - 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-001 (Standard)

## 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)	0.95 kg (2.1 lb) standard, including size kids 2 shoe	
Shoe size	US size 1.5 Kids / 33 EU to US size 4 Kids / 36EU	
Device dimensions	Standard length (heel rod to toe plate)	3.5 to 4.5 US Kids / 35 to 36.5 EU - 23.1 cm (9.08 in) 2.5 to 3.5 US Kids / 34 to 35.5 EU - 21.5 cm (8.48 in) 1.5 to 2.5 US Kids / 33 to 34 EU - 20.7 cm (8.15 in)
	Child width	12.0 cm (4.73 in.)
	Child overall height	30.2 cm (11.88 in.)

# Caplex EXO-001 (Child)

## Technical Specifications

# Features

- ★ Best-in-class torque density: very high peak ankle plantarflexion torque output in a lightweight package
- ★ Highly adjustable design to accommodate users of varying foot length
- ★ Carefully designed shoe integration and strapping ensure durability and comfortable user experience even over long testing periods
- ★ Tried-and-true robust design developed over 12+ years of walking and running studies now with brand new capabilities for younger users
- ★ Compatible with Full-Sized and Portable Caplex Systems
- ★ Narrowed, shortened, and child size variations available to accommodate users with shorter shanks and/or narrower step widths

