

# Tech United Eindhoven: Humanoid Robot Specification 2013

Robot name	TUlip
Degrees of freedom	17
Robot top height	125 cm
Robot weight	25 kg
Height robot center of mass	71 cm
Leg heights	56.5 cm
Head height	15.5 cm
Foot width	15 cm
Foot length	21 cm
Arm cross	122 cm
Arm stretch	153 cm
Actuators	Maxon RE30 60W DC motors with planetary gearbox Maxon RE35 90W DC motors with planetary gearbox Dynamixel RX-28
Computing unit	1Ghz PC104 Single Board Computer
Camera	Two SRV-1 Blackfin VGA Low Light Color Cameras
Motor sensors	Maxon Incremental encoders, 500 counts per revolution
Joint sensors	Scancon Incremental encoders, 30000 counts per revolution
Feet	Single element Tekscan Flexiforce flexible load cells STMicroelectronics 3D accelerometers
IMU	Xsens MTi
Walking speed	0.2 m/s
Operating time	30 minutes

