Darmstadt Dribblers KidSize Robots 2009
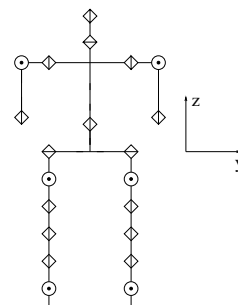

Autonomous humanoid robot *Bruno* kicking a ball (left), and kinematical structure of the robots (right).

	Model DD2008
Height [cm]:	57.5
Weight [kg]:	3.34 kg
Walking Speed [m/s] :	0.4 (max)
Degrees of Freedom:	21 in total with 6 in each leg, 3 in each arm, 1 in the waist, 2 in the neck
Servo Motors:	18 RX-28 3 RX-64 (all from Robotis)
Sensors:	
Camera	Philips SPC 1300 NC
Resolution	up to 1.3 MP
Color space	YUV
Frame rate [fps]	up to 90
Angle [°]	80
Joint Angle Encoder	21 (integrated in servos)
Gyroscope (body)	Silicon-Sensing CRS03-04, 3 axes
Accelerometer	Analog Devices ADXL330, 3 axes
Control frequency [Hz]	100
Microcontroller Board:	
Manufacturer	Hajime Research Institute Ltd.
Processor	32bit μC SH2/7211
Speed	160 MHz
Onboard PC:	
Manufacturer	DigitalLogic PC/104
Processor	AMD Geode LX800
Speed	500 MHz
Operating system:	Linux
Network:	Wireless LAN, LAN
Batteries:	Li-Po 18.5 V, 1300 mAh

Technical data of the humanoid kid size robot model used by the Darmstadt Dribblers in 2009.