






















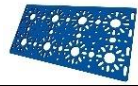









This kit contains over 1,500 individual pieces. Please ensure you are familiar with the contents.




You can find training material and files needed to get started on our resources site at <https://www.studica.co/resources-4>


Worldskills Mobile Robotics 2023 Parts List







Description	Part #	Image	In Pack	In Kit
Electronics and Accessories				
IR Range Sensor (10 cm to 80 cm)	40117		1	2
IR Range Sensor Bracket	40118		1	2
Zip Ties, Blue, 150mm (100 pack)	70010		100	1
12V 3,000 mAh NiMH Battery Pack, PP45	70018		1	2
NiMH Battery Pack Charger, PP45	70019		1	1
Powerpole 45 Extension Cable, 14AWG, 50cm	70021		1	2
Robotics Toolbox	70055		1	1
Remote Controller - Bluetooth	70112		1	1
2.5mm Hex Ball End Screwdriver	70142		1	1
Hex Key Metric 7 Piece Set (1.5, 2, 2.5, 3, 4, 5, 6)	70144		1	1
Combination Wrench, 5.5mm	70145		1	1
Cobra Line Follower Sensor	70151		1	1
Titan Quad Motor Controller	70152		1	1

VMX Cable Pack	70160		1	1
Titan Cable Pack w/1 CAN Cable & 2 JST-VH to JST-VH Cable	70162		1	1
Power Control Panel	70170		1	1
VMX Robotics Controller	70176		1	1
USB Cable, Type A to Type C, Blue, 2M	70186		1	1
Ultrasonic Distance Sensor	70753		1	2
Ultrasonic Distance Sensor Bracket	40238		1	2
Analog Module w/JST-SH to JST-GH Cable	70755		1	1
PWM cable Set - TJC8 3 pin, 22AWG, F-F - 12 pcs	71011		12	1
Dupont Single Pin, 4 wire, F-F Cable - 2 pack	71014		2	1
3D Depth Camera	71044		1	1
Short Lever Limit Switch (4 pack)	72060		4	1
Maverick 12V DC Gear Motor w/Encoder	75001		1	4
Multi-Mode Smart Servo	75002		1	3
Smart Robot Servo Programmer	75003		1	1
6V DC AA Battery Holder w/TJC8 Female, 22AWG	75004		1	1
Servo Power Block	75006		1	1
U-Channel				
336mm U-Channel	76012		1	3
288mm U-Channel (2 pack)	76013-2		2	2
144mm U-Channel (2 pack)	76016-2		2	1
96mm U-Channel (2 pack)	76017-2		2	1

48mm U-Channel (2 pack)	76018-2		2	4
288mm Low U-Channel (2 pack)	76028-2		2	1
Flat Beams				
288mm Flat Beam (2 pack)	76043-2		2	2
96mm Flat Beam (2 pack)	76047-2		2	2
Flat Brackets				
288mm x 40mm Flat Bracket (2 pack)	76061-2		2	1
192mm x 40mm Flat Bracket (2 pack)	76063-2		2	1
144mm x 40mm Flat Bracket (2 pack)	76064-2		2	2
96mm x 40mm Flat Bracket (2 pack)	76065-2		2	3
192mm x 96mm Flat Bracket (2 pack)	76066-2		2	1
Irregular Brackets				
120 Degree Bracket (2 pack)	76080-2		2	3
90 Degree Bracket (2 pack)	76081-2		2	4
135 Degree Bracket (2 pack)	76082-2		2	1
96mm Adjustable Flat Bracket (2 pack)	76083-2		2	2
T Bracket (2 pack)	76084-2		2	1
X Bracket (2 pack)	76085-2		2	1
Inside U Bracket (2 pack)	76086-2		2	2
L Bracket (2 pack)	76087-2		2	4
Battery Clip (2 pack)	76088-2		2	1

Inside L Bracket (2 pack)	76089-2		2	4
Mounting Plates				
Motor Mount Plate	76140		1	4
Motor Mount Clamp Kit	76141		1	4
End Piece Plate (2 pack)	76143-2		2	4
Servo Standard Front Mount	76144		1	3
Servo Mount Flat Plate	76145		1	3
Servo Mount Offset Plate	76146		1	3
Servo Horn 25T	76148		1	3
6mm D-Shaft Servo Hub 25T	76149		1	3
Axles, Slides, Rack & Pinion				
6mm x 35mm D-Shaft (6 pack)	76159-6		6	1
6mm x 70mm D-Shaft (6 pack)	76160-6		6	1
6mm x 96mm D-Shaft (6 pack)	76161-6		6	1
6mm x 432mm D-Shaft (2 pack)	76162-2		2	1
Rack & Pinion Set	76170-2		2	1
250mm Linear Slide Kit	72064		1	1
Standoffs				
42mm Standoff (12 pack)	76180-12		12	1
48mm Standoff (12 pack)	76181-12		12	1
25mm Standoff (12 pack)	76182-12		12	1
Screws, Nuts				

M3 x 8mm Socket Head Cap Screw (pack of 100)	76200-100		100	2
M3 x 10mm Socket Head Cap Screw (pack of 100)	76201-100		100	2
M3 x 12mm Socket Head Cap Screw (pack of 100)	76202-100		100	2
M3 x 10mm Button Head Cap Screw (pack of 50)	76203-50		50	1
M3 x 20mm Socket Head Cap Screw (pack of 50)	76209-50		50	1
M3 x 30mm Socket Head Cap Screw (pack of 50)	76206-50		50	1
M3 Kep Nut (pack of 100)	76204-100		100	2
M3 Nyloc Nut (pack of 100)	76205-100		100	1
Gears, Sprockets, Pulleys, Belts				
32 Tooth Gear (2 pack)	76220-2		2	2
64 Tooth Gear (2 pack)	76221-2		2	2
13 Tooth Bevel Gear, 6mm D-Shaft (2 pack)	76223-2		2	2
26 Tooth Bevel Gear (2 pack)	76224-2		2	2
24 Tooth - Sprocket (2 pack)	76226-2		2	1
32 Tooth Sprocket (2 pack)	76227-2		2	1
#25 Chain with Master Links, 5 feet(152cm)	76230		1	1
6mm Timing Pulley, 10 Tooth (2 pack)	76232-2		2	1
10mm Timing Belt (1 meter)	76233		1	1
Bushings, Bearings, Coupling, Collars and Spacers				
6mm Shaft Hub (4 pack)	76284-4		4	4
Bushing Bronze 6mm ID x 8mm OD (12 pack)	76300-12		12	1
Bushing Bronze 6mm ID x 14mm OD (12 pack)	76301-12		12	1
Flange Bearing 6mm ID, 14mm OD, 15mm Flange (12 pack)	76302		12	1
Coupling 6mm ID D-Shaft, 12mm OD (2 pack)	76303-2		2	2

Collar 6mm ID D-Shaft, 12mm OD (6 pack)	76304-6		6	2
Shaft Spacer Plastic 6mm ID x 10mm OD x 1mm L (24 pack)	76305-24		24	1
Shaft Spacer Plastic 6mm ID x 10mm OD x 2mm L (24 pack)	76306-24		24	1
Shaft Spacer Plastic 6mm ID x 10mm OD x 5mm L (12 pack)	76307-12		12	1
Shaft Spacer Plastic 6mm ID x 10mm OD x 20mm L (6 pack)	76308-6		6	1
Wheels				
Omni Wheel (100mm, Double Plastic, w/ integrated 6mm Hub)	76260		1	4