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

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