Contents

Kits and Bundles .................................. 3
Electronics ...................................... 7
Motion ........................................... 11
Structure ......................................... 19
Other ............................................... 25
Competition Products ......................... 27
Hands-on Teaching Tools

VEX EDR V5 Kits & Bundles harnesses the excitement of building robots and immerses learners in computer science and problem solving concepts. Educators can bring VEX EDR into the classroom with our custom STEM Labs or use it as a standalone teaching tool in after-school robotics clubs as well as in the VEX Robotics Competition.

### Classroom Kits
- **V5 Classroom Starter Kit**
  - Single Kit: 276-7010 $649.00
  - Bundle of 6: 276-7050 $3,899.00

- **V5 Classroom Super Kit**
  - Single Kit: 276-7020 $1,299.00
  - Bundle of 6: 276-7060 $7,799.00

- **V5 System Bundle**
  - Single Kit: 276-7000 $599.00
  - Bundle of 6: 276-7040 $1,649.00

- **V5 Control System**
  - Single Kit: 276-7030 $999.00
  - Bundle of 6: 276-7060 $7,799.00

The V5 Classroom Super Kit engages students by bringing math, engineering, and computer science classes to life. Through hands-on building and programming, students can explore these subjects while moving at their own pace through our STEM Labs, or the hardware can be easily integrated into existing curriculum.

- Contains (1) V5 System Bundle
- Includes everything needed to build the VEX V5 Clawbot
- Scalable programming software suite available with VEXcode
- STEM Labs help develop how students approach critical thinking & problem solving

The V5 System Bundle takes your VEX EDR robot to the next level with the V5 System Bundle. This bundle includes everything you need to get started with V5, and is engineered to provide the most advanced robotics experience, right at your fingertips.

- Designed to scale from the classroom to the competition field
- Includes all necessary components to get started with the V5 System
- Scalable programming software suite available with VEXcode

### V5 System Bundle
- Single Kit: 276-7000 $599.00
- Bundle of 6: 276-7040 $1,649.00

*All prices shown are in US Dollars and valid for US customers only. International pricing and availability varies by location.*
### Classroom Bundles

- **V5 Classroom Starter Bundle**
  - Contains 6 V5 Classroom Starter Kits (276-7010)
  - Scalable programming software suite available with VEXcode
  - Standards-aligned STEM Labs develop how students approach critical thinking & problem solving
  - Everything needed to implement a hands-on STEM learning solution for a classroom of 24 students! This bundle contains all the necessary parts to bring engineering, math, technology or computer science to life with six V5 Classroom Starter kits, plus fun game elements that turn educational learning into a competitive sport!

- **V5 Classroom Super Bundle**
  - Contains 6 V5 Classroom Super Kits (276-7020)
  - Scalable programming software suite available with VEXcode
  - Standards-aligned STEM Labs develop how students approach critical thinking & problem solving
  - Kickstart your robotics program or classroom with the V5 Classroom Super Bundle. This bundle contains more than enough hardware, electronics, and motion parts to outfit an entire classroom with the ultimate educational robotics experience. Get started today!

### Competition Kits

- **V5 Competition Starter Kit**
  - Compete with over 11,000 VEX Robotics Competition teams
  - Lightweight aluminum structure designed specifically for competition
  - Scalable programming software suite available with VEXcode
  - The perfect all-in-one kit for any new VEX Robotics Competition team, or an existing team looking to supercharge their robot. This kit contains everything needed to get up and running with the V5 Control System, along with a wide variety of aluminum structural parts to build lighter and faster mechanisms, and the Vision Sensor to see the competition from a whole new perspective.

- **V5 Competition Super Kit**
  - Compete with over 11,000 VEX Robotics Competition teams
  - Build powerful mechanisms with the included high strength gears, sprockets, and shafts
  - Scalable programming software suite available with VEXcode
  - Take educational robotics to the next level by competing in the VEX Robotics Competition. The only limit to this open-ended building system is your own imagination! The V5 Competition Starter Kit includes a complete V5 control system, aluminum structural elements, and high strength parts so that a team of students can build a bigger, stronger, and faster robot.
Everything centers on the V5 Robot Brain. The color touchscreen makes the V5 Brain familiar and easy to use without needing a manual. Connect your motors and sensors to any of the 21 smart ports. You can even use existing Cortex sensors by connecting them to the additional eight 3-Wire ports. A graphical dashboard is built-in for every connected device, providing incredible teaching and diagnostic capability.

Other features include:
- 4.25" full color touch-screen
- Dashboards provide real-time diagnostics
- Download programs wirelessly
- Programmable with VEXcode

Program unique commands with 12 buttons

LCD Screen for real-time information

V5 Robot Brain

V5 Smart Motor and Gear Cartridges

Precise and powerful robot control, now available for everyone. Users have control of motor speed, power, angle and exact revolutions, making autonomous control accurate and repeatable. The swappable gear cartridges give the motor three maximum speed options: 100, 200 and 600 rpm. New to V5 is consistent motor performance regardless of battery level or motor temperature.

- Use the built-in encoder to track a robot’s rotational position and velocity
- Ships with the standard gear cartridge of 18:1 (200 RPM)
- Cartridges for 36:1 (100 RPM) & 6:1 (600 RPM) are also available
- Compatible with both VEX EDR shaft sizes

V5 Smart Motor
V5 Smart Motor 36:1 Cartridge (100RPM)
V5 Smart Motor 18:1 Cartridge (200RPM)
V5 Smart Motor 6:1 Cartridge (600RPM)

V5 Smart Cables

V5 Smart Cables allow robot components such as motors and sensors to communicate with the Robot Brain. These are available to purchase at pre-cut short and long assortments, or create your own custom length wires with the V5 Crimping Tool!

- Use the built-in encoder to track a robot’s rotational position and velocity
- Ships with the standard gear cartridge of 18:1 (200 RPM)
- Cartridges for 36:1 (100 RPM) & 6:1 (600 RPM) are also available
- Compatible with both VEX EDR shaft sizes

V5 Smart Cables (Starter Pack)
V5 Smart Cables (Short Assortment)
V5 Smart Cables (Long Assortment)
V5 Smart Cable Stock (8m)
V5 Smart Cable Connectors (50-Pack)

V5 Power Cable Assortment

An assortment of spare V5 Robot Power Cables. This cable connects the V5 Robot Brain to the V5 Robot Battery Li-Ion 1100mAh. Cables come in sizes 180 mm, 300 mm, and 500 mm.

V5 Power Cable Assortment

V5 Robot Battery

This lithium-ion battery has enough power to run ten V5 motors at full power continuously. Built-in electronics handles charging, cell balancing and precise capacity measurement. Check your battery level with the press of a button. Charge time is approximately 60 minutes, and you can even use the Brain while the battery charges.

- Built-in charge indicator lights
- Charge time is approximately one hour

V5 Robot Battery Charger

Charge your battery quickly with the V5 Robot Battery Charger. Your V5 Robot Battery Li-Ion 1100mAh can be fully recharged in under 60 minutes.
See a whole new perspective on STEM education. Use the Vision Sensor to locate up to seven individual colored objects at once. Now your robot can "happen" by adding sensor implementation aspects to path planning. Increase the challenge, and your robot’s abilities, by using sensors that optimize your robot’s performance.

Vision Sensor

2-Wire Motor 393

- STMicroelectronics ARM® Cortex® M3 user processor
- (2) UART Serial Ports
- (2) 2-wire Motor ports
- (12) Fast digital I/O ports that can be used as interrupts
- Programmable with VEXcode

VEX ARM® Cortex®-based Microcontroller

VEXnet Key 2.0

The VEXnet Key 2.0 provides wireless communication between VEX ARM® Cortex®-based Microcontroller and VEXnet Joysticks. Think of the VEXnet Key 2.0 as the ‘radio’ that enables remote control. This key utilizes the new VEXnet 2.0 communication protocol over a custom 2.4 GHz radio. The VEXnet Key 2.0 is a functionally identical replacement for the first generation VEXnet key. However, a link cannot use a first generation key on one side and a VEXnet Key 2.0 on the other side of the link.

- 3-Wire Extension Cable 6" (4-pack) 276-1427 $5.99
- 3-Wire Extension Cable 12" (4-pack) 276-1426 $8.99
- 3-Wire Extension Cable 24" (4-pack) 276-1425 $8.99
- 3-Wire Extension Cable 36" (4-pack) 276-1976 $8.99
- 3-Wire "Y" Cable 6" (pack) 276-1423 $5.99
- 3-Wire Extension Cables (Small Bundle) 276-1395 $5.99
- 3-Wire Extension Cables (Large Bundle) 276-1424 $16.99

VEXnet Joystick

Use 393’s to power your intakes, lifts, and drivetrains. We also offer replacement gears to give your motors a speed boost. Use 393’s to power your intakes, lifts, and drivetrains.

- STMicroelectronics ARM® Cortex® M3 user processor
- (12) Fast digital I/O ports that can be used as interrupts
- Programmable with VEXcode

VEXnet Key 2.0

- 276-1262 $22.99
- 276-2487 $5.99
- 276-3527 $14.49
- 276-2193 $10.99

- 2-Wire Motor 393

VEX EDR 393 motors are the primary motors used for robot mechanisms. We also offer replacement gears to give your motors a speed boost. Use 393’s to power your intakes, lifts, and drivetrains.

- 2-Wire Motor 393

- 276-2177 $16.99

The VEXnet Joystick is the most intuitive way to wirelessly control a VEX EDR robot. With a familiar layout inspired by video game controllers, the VEXnet Joystick features a 3-axis accelerometer, 8 face buttons, and 4 ‘trigger’ buttons. Powered by 4 AA batteries or through the VEXnet Joystick Power Adapter, VEXnet Key 2.0 is required for wireless communication.

- Only compatible with the VEX ARM® Cortex®-based Microcontroller
- Wireless robot control using VEXnet technology
- When using multiple drivers to control a single robot, they must both be using the same type of transmitter – the VEXnet Joystick and the 75MHz transmitter cannot be mixed
Claw Kit
Easily grab and manipulate various objects. Motor required but not included.
- Strong enough to hold a soft drink can
- Dexterous enough to grab a feather
- Comes partially assembled
- Compatible with all VEX Mechanical Parts

Claw Kit v2 276-2212 $21.99

Versatile enough to hold a variety of objects

Gears mesh to move the claw

Omni-Directional Wheels

Defense may not always win championships, but being able to move does. Put some power on the floor with our large variety of wheel options available for builders. Omni-Directional wheels roll forward like normal wheels, but slide sideways with almost no friction (no skidding during turns). Use these wheels to make your robot turn smoothly or build a holonomic drivetrain.

1. 2.75" Omni-Directional Wheel - Double Roller (2-pack) 276-1902 $21.99
2. 3.25" Omni-Directional Wheel (4-pack) 276-3526 $43.99
3. 4" Omni-Directional Wheel (2-pack) 276-2185 $27.49

Traction Wheels

Traction Wheels are designed for optimal grip on soft surfaces like the foam tiles used in the VEX Robotics Competition. Removing the tread of the 2.75" wheel reveals a low-friction wheel that can be used for other purposes. Removing the tread of the 4" wheel reveals a ribbed plastic wheel.
- Offered in multiple sizes
- High traction tire profile
- Versatile wheel inserts for a variety of applications

1. 2.75" Wheel (4-pack) 276-1496 $10.99
2. 3.25" Traction Wheel (4-Pack) 276-3525 $21.99
3. 4" Wheel (4-pack) 276-1497 $21.99
4. 4" High Traction Tire (4-pack) 276-1489 $14.49

Mecanum Wheels

Mecanum Wheels allow savvy robot designers to create drivetrains capable of moving in any direction using a standard chassis shape. Simply power each wheel with its own independent motor by changing the directions the wheels spin, your robot can now move sideways!

1. 2.75" Wheel (4-pack) 276-1496 $10.99
2. 3.25" Traction Wheel (4-Pack) 276-3525 $21.99
3. 4" Wheel (4-pack) 276-1497 $21.99
4. 4" High Traction Tire (4-pack) 276-1489 $14.49
Contains four sizes of Spur Gears (12-, 36-, 60-, and 84-tooth gears). The 60- and 84-tooth gears have extra mounting holes for attaching metal bars or parts to these gears when using them as part of a turntable system or similar design.

- Create robot transmissions, gearboxes, and gear reductions
- Vary the speed or torque of robot motion systems
- Increase design possibilities for your robots

Intake rollers are specifically designed for ball intake systems. The flexible rubber fingers grip the ball. The fingers also deflect, allowing for ball size variation.

- Rubber fingers
- Hard plastic center with square hole

Intake Rollers

Contains four sizes of Spur Gears (12-, 36-, 60-, and 84-tooth gears). The 60- and 84-tooth gears have extra mounting holes for attaching metal bars or parts to these gears when using them as part of a turntable system or similar design.

- Create robot transmissions, gearboxes, and gear reductions
- Vary the speed or torque of robot motion systems
- Increase design possibilities for your robots

Intake Rollers

High Strength Gears

Gears are one of the primary sources of power transmission in VEX EDR. Build mechanisms capable of achieving higher torque or speed than ever before with High Strength Gears - lift heavier loads and survive bigger impacts with the additional gear ratio options provided by the largest high strength gear available.

- Works with the VEX High Strength Gear Kit or any VEX spur gear
- Double-thick face width and ribbing provide added strength
- Metal Square Hole Inserts prevent axles from "stripping"
- Build gearboxes that resist high shock loads
- Bolt gears together for added strength

Intake Rollers

Contains several gears types designed to help you build advanced mechanical systems.

- Create linear motion with Rack Gears
- Transfer motion 90 degrees with Bevel Gears
- Add a differential to your drivetrain
- Get a large-reduction with Worm Gears

Advanced Gear Kit

Sprockets and Chain

Simply the best way to transfer power over long distances on a VEX EDR robot. Sprockets come in a variety of sizes for different ratio possibilities. Each chain link is also a master link, which allows for quick and painless substitution.

The standard Sprocket & Chain Kit is designed to carry moderate loads, while the High Strength Chain & Sprocket Kit is capable of lifting up 50 pounds.

1 Sprocket & Chain Kit
2 High Strength Sprocket & Chain Kit
3 High Strength Sprocket 6 Tooth (8-Pack) 276-3876 $14.99
4 High Strength Sprocket 12 Tooth (4-Pack) 276-3877 $14.99
5 High Strength Sprocket 18 Tooth (4-Pack) 276-3878 $16.99
6 High Strength Sprocket 24 Tooth (4-Pack) 276-3879 $14.99
7 High Strength Sprocket 30 Tooth (4-Pack) 276-3880 $14.99
8 Additional High Strength Chain 276-2172 $27.99

Sprockets and Chain

Gear Kit

Contains four sizes of Spur Gears (12-, 36-, 60-, and 84-tooth gears). The 60- and 84-tooth gears have extra mounting holes for attaching metal bars or parts to these gears when using them as part of a turntable system or similar design.

- Create robot transmissions, gearboxes, and gear reductions
- Vary the speed or torque of robot motion systems
- Increase design possibilities for your robots

Gear Kit

Advanced Gear Kit

Contains several gears types designed to help you build advanced mechanical systems.

- Create linear motion with Rack Gears
- Transfer motion 90 degrees with Bevel Gears
- Add a differential to your drivetrain
- Get a large-reduction with Worm Gears

Advanced Gear Kit

Tank Tread

The Tank Tread kit contains over five feet of tank tread. Use this tank tread to build robot tracks which can overcome tough terrain, or build a conveyor belt for scooping up objects. The Tank Tread Upgrade Kit contains soft rubber pads for increased traction and fins to aid conveyor belt mechanisms.

- Climbing over obstacles
- Traverse rough terrain or soft surfaces
- Can be used for a robot conveyor belt
- Every section is a master link, create treads of any length

Tank Tread Kit
2 Tank Tread Upgrade Kit

Tank Tread

Winch and Pulley Kit

Provides the ability to implement a winch and pulley system and create block and tackle mechanisms that utilize mechanical advantage.

- Lift, lower, hang, drag and more
- Configurable for many applications
- Ratchet and pawl can be engaged to prevent back driving

Winch and Pulley Kit

Stay connected with @VEXRobotics!
Removable inserts for High Strength Gears and some wheels that allow for versatility in user rest on High Strength Shaft Bearings attached to those two pieces without any cutting required. This means that if you use standoffs to hold together two pieces of metal, the High Strength Shaft can rest on High Strength Shaft Bearings attached to those two pieces without any cutting required. VEX EDR 2", 3", and 4" High Strength Shafts are actually designed about 1 mm shorter than their respective 2", 3", and 4" 8-32 Standoffs. This means that if you use standoffs to hold together two pieces of metal, the High Strength Shaft can rest on High Strength Shaft Bearings attached to those two pieces without any cutting required.

Spacers and Washers

Collars lock to drive shafts, keeping wheels and gears from sliding along the shaft. Standard Shaft Collars are fastened in place using a set screw, while Clamping Shaft Collars use standard VEX EDR button head screws and nuts to maintain a tight lock without scratching or damaging the shaft. Rubber Shaft Collars easily slide onto VEX EDR 0.125" shafts and use friction between to keep wheels and gears in place.

High Strength Shafts

High Strength Shaft Hardware functions similarly to standard ¼" shaft hardware, just on a larger scale. Use the High Strength Shaft Bearing to allow shafts to turn smoothly, the High Strength Shaft Spacer Kit to position objects on a shaft while reducing friction, and the High Strength Clamping Collar to hold everything in place.

VEX EDR 2", 3", and 4" High Strength Shafts are actually designed about 1 mm shorter than their respective 2", 3", and 4" 8-32 Standoffs. This means that if you use standoffs to hold together two pieces of metal, the High Strength Shaft can rest on High Strength Shaft Bearings attached to those two pieces without any cutting required.

Spacers and Washers

A Spacer is used to create a space between two objects, often to properly position them and to eliminate "slop" on shafts. A Washer is used to distribute the load of a threaded fastener, and Teflon washers can be used when low friction is necessary. VEX EDR washers fit on all VEX EDR screws and shafts.

Hex Nut Retainers

Assembling a VEX robot just got easier with our Hex Nut Retainers. With a center hole sized to securely fit a Hex Nut, a #8-32 screw can be tightened without the need for a wrench or pliers. When mounted, they provide multiple points of contact on structural components for stability.

Bearings

Use bearings to keep your mechanisms and wheels moving smoothly. The Bearing Flat mounts directly on a piece of VEX EDR structure and supports a shaft which runs perpendicular and directly through the structure, while Bearing Blocks support a shaft which is offset either above, below, or to the side of the structure. Reusable Bearing Attachment Rivets make mounting them easy.

Lock Bars allow any VEX EDR component to be "locked" to a shaft so that it will spin with the shaft. The Drive Shaft Bar Lock is a steel version of the Lock Bar.

Universal Joint (5-pack)

Provide a mechanical link between two intersecting, non-parallel shafts. Each side of the VEX U-Joint includes a socket for a VEX square shaft, and a set screw to hold the shaft in place.

- Create complex robot mechanisms
- Transfer power "around corners" and at angles

Universal Joint (5-pack) 276-2723 $10**
The Linear Motion Kit provides a method for VEX builders to create linear mechanisms. Utilize the low friction slide rails for your own mechanisms or combine them with included Rack Brackets and VEX Rack Gears (not included) to build direct driven linear actuators.

- Rails include holes on 0.500" increments
- Two rail lengths included - 12" and 17.5"
- Use with VEX EDR 8-32 hardware (not included)
- Additional Truck Kit contains (16) spare plastic trucks

- Rails include holes on 0.500" increments
- Two rail lengths included - 12" and 17.5"
- Use with VEX EDR 8-32 hardware (not included)
- Additional Truck Kit contains (16) spare plastic trucks

Turntable Bearing Kit

Provides two options for low friction, high load rotational joints. These are especially well suited for rotational joints with high side load - this kit makes it easy to build a turret on your robot!

- (1) 2.6" diameter Turntable Bearing
- (1) 4.25" diameter Turntable Bearing

Note: 12 tooth pinion gear required (not included)

Turntable Bearing Kit 276-1810 $21**

Advanced Mechanics and Motion Kit

Contains a variety of mechanisms to help a robot builder learn about the mechanics of motion. Use them to build examples of worm gears, lead screws, universal joints, bevel gear reductions and rotary cams.

- Create complex robot mechanisms
- Learn advanced mechanics principles

Advanced Mechanics and Motion Kit 276-2045 $27.49

Advanced Gearbox Brackets

These gearbox brackets provide support for several options of advanced motion, allowing advanced mechanical VEX EDR designers to create new ingenious mechanisms.

- Create Linear Motion with rack gears
- Transfer Motion 90 degrees with bevel gears
- Add a differential to your drivetrain
- Get a high reduction with worm gears

- Create Linear Motion with rack gears
- Transfer Motion 90 degrees with bevel gears
- Add a differential to your drivetrain
- Get a high reduction with worm gears

Turntable Bearing Kit

Provides two options for low friction, high load rotational joints. These are especially well suited for rotational joints with high side load - this kit makes it easy to build a turret on your robot!

- (1) 2.6" diameter Turntable Bearing
- (1) 4.25" diameter Turntable Bearing

Note: 12 tooth pinion gear required (not included)

Turntable Bearing Kit 276-1810 $21**

Single Acting Pneumatic Kits

Pneumatic cylinders use compressed air (rather than motors) to produce motion that rests in one of 2 states: fully extended or fully retracted. Pneumatic Kits 1 and 2 are complete pneumatics systems for use on VEX EDR robots; Kit 1A and 2A add-ons cannot be used without a Kit 1 or 2.

- Uses one VEX EDR Controller I/O port per air cylinder
- Reservoir is filled using a standard tire pump fitting
- Uses air pressure to extend the piston and an internal spring to automatically retract the piston.

1 Pneumatics Kit 1 - Single Acting Cylinders 275-0274 $199**
2 Pneumatics Kit 1A - Single Acting Cylinder Add-On 275-0275 $64**

Pneumatic Accessories

The Pneumatic Solenoid Driver Cable takes a digital On/Off signal from a VEX EDR microcontroller and controls the 5V power applied to a pneumatic solenoid. Extra Pneumatics Tubing can be used for more versatility in design. Both are included in Pneumatics Kits 1 and 2.

1 Solenoid Driver Cable (2-pack) 275-1417 $32**
2 Pneumatics Tubing (5') 275-0447 $5**
Lighten the total weight of a robot or mechanism while still keeping it strong. VEX aluminum kits contain the same metal components as standard structural kits (C-Channel, Plates, and Bars), at a fraction of the weight for improved robot performance!

- Compatible with all VEX EDR motion and structure components

### Aluminum Kits
- Aluminum Chassis Kit 25x25
  - 276-2319 $39**
- Long Aluminum Structure Kit
  - 275-1410 $89**
- Aluminum Structure Kit
  - 275-1097 $89**

### Aluminum C-Channels
- Made from 5052-H32 aluminum, 0.064" thick
- Wire brushed & clear anodized finish
- Can be cut on 0.500" increments.
- Made from cold rolled steel, 0.046" thick, zinc plated.
- Can be cut on 0.500" increments.

- VEX C-channel has holes on 0.500" increments. This structural member’s excellent strength and bending resistance is perfect for building robust robots.
  - Five sizes available
  - Made from 5052-H32 aluminum, 0.064" thick
  - Each channel is segmented into cuttable 2.5" pieces
  - Made from cold rolled steel, 0.046" thick, zinc plated.
  - Can be cut on 0.500" increments.

### Steel C-Channels
- Made from cold rolled steel, 0.046" thick, zinc plated.
- Can be cut on 0.500" increments.

### Steel Bar 1x25 (8-pack)

### Steel Plates

### Steel Angles

### Aluminum Structure

### Steel Bar 1x25 (8-pack)

### Steel Plates

### Steel Angles

### Gussets

### VEX C-Channel

### VEX Angle

### Steel Bar 1x25 (16-pack)

### Steel Plates

### Steel Angles

### Gussets

### VEX C-Channel

### VEX Angle

### Steel Bar 1x25 (16-pack)

### Steel Plates

### Steel Angles

### Gussets
Standard VEX chassis kits include (2) bumpers and (4) rails apiece. The flexibility and variety of design options makes these a great starting point for any mobile robot project.

- Rail mounting locations allow for variable chassis width
- Space between rails is ideal for a protected chain run or gear reduction
- Wheels may be mounted outboard or between the rails for extra support
- Rails sold separately for additional versatility

### Chassis Kits

<table>
<thead>
<tr>
<th>Chassis Kit</th>
<th>Model</th>
<th>Part No.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small 15x16</td>
<td></td>
<td>276-1024</td>
<td>$21**</td>
</tr>
<tr>
<td>Medium 25x25</td>
<td></td>
<td>275-1033</td>
<td>$24**</td>
</tr>
<tr>
<td>Large 35x35</td>
<td></td>
<td>275-1034</td>
<td>$27**</td>
</tr>
</tbody>
</table>

### Chassis Rails

<table>
<thead>
<tr>
<th>Rail Type</th>
<th>Part No.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>3x12x25 (4-pack)</td>
<td>275-1145</td>
<td>$16**</td>
</tr>
<tr>
<td>2x12x15 (4-pack)</td>
<td>275-1146</td>
<td>$19**</td>
</tr>
</tbody>
</table>

### Screws

#### #6-32 Screws

- **Hex Drive 5/64"**
  - #6-32 x 1/4" Screw (50-pack) | 275-1066 | $8**
  - #6-32 x 1/8" Locking Screw (100-pack) | 276-1958 | $10**

- **Hex Drive 3/32"**
  - #8-32 x 1/4" Screw (100-pack) | 275-1002 | $8**
  - #8-32 x 1/8" Locking Screw (100-pack) | 275-1007 | $10**

#### #8-32 Star Drive Screws

- Use T15 Drivers

- **Hex Drive 5/64"**
  - #8-32 x 1/4" Star Drive Screw (100-pack) | 276-1408 | $10.99
  - #8-32 x 1/8" Star Drive Screw (100-pack) | 276-1409 | $10.99

- **Hex Drive 3/32"**
  - #8-32 x 1/4" Star Drive Screw (100-pack) | 275-4996 | $7.79
  - #8-32 x 1/8" Star Drive Screw (100-pack) | 275-4997 | $7.79

#### #8-32 Locking Screws

- Use T15 Drivers

- **Hex Drive 5/64"**
  - #8-32 x 1/4" Locking Star Drive Screw (100-pack) | 275-4998 | $9.49
  - #8-32 x 1/8" Locking Star Drive Screw (100-pack) | 275-4999 | $9.49

- **Hex Drive 3/32"**
  - #8-32 x 1/4" Locking Star Drive Screw (100-pack) | 276-5001 | $10.99
  - #8-32 x 1/8" Locking Star Drive Screw (100-pack) | 276-5002 | $10.99

#### #8-32 Specialty Screws

- Use T15 Drivers

- **Hex Drive 5/64"**
  - #8-32 Shoulder Screw (25-pack) | 276-1408 | $10.99

- **Hex Drive 3/32"**
  - 1/4" Shoulder Screw (25-pack) | 276-1409 | $10.99

### #8-32 Nuts

- A hardware fastener with a threaded hole. All VEX nuts are 8-32 threads.

  - **Hex Drive 5/64"**
    - #8-32 Nyloc Nut (100-pack) | 275-1027 | $4.99
  
  - **Hex Drive 3/32"**
    - #8-32 Nyloc Nut (100-pack) | 275-1028 | $4.99
  
  - **Hex Drive 1/4"**
    - #8-32 Nyloc Nut (100-pack) | 275-1029 | $4.99

The proverbial glue that holds your robot together. VEX EDR Screws come in a multitude of lengths and three standard head sizes, 6-32, 8-32, and T15. There’s nothing more frustrating than a stripped screw. With VEX EDR Star Drive Screws, this becomes a thing of the past. These grade 8 screws were designed to withstand a great amount of torque, which allows builders to truly “lock down” their mechanisms.

Hex Drive 3/32" - Nuts sold separately for additional versatility

- Wheels may be mounted outboard or between the rails for extra support
- Space between rails is ideal for a protected chain run or gear reduction
- Rail mounting locations allow for variable chassis width

### #8-32 Nuts

<table>
<thead>
<tr>
<th>Type</th>
<th>Part No.</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nyloc Nut</td>
<td>275-1027</td>
<td>$4.99</td>
</tr>
<tr>
<td>Hex Nyloc Nut</td>
<td>275-1028</td>
<td>$4.99</td>
</tr>
<tr>
<td>Hex Nut</td>
<td>275-1029</td>
<td>$4.99</td>
</tr>
</tbody>
</table>
Designed to serve as a foundation for a variety of robotics applications. Use them as a base to create a large stationary robotic arm, interlock them to build larger manufacturing systems, or even use them as structural pieces in large-scale robotic applications.

- (2) Base Plates included
- 15-holes wide x 30-holes long
- Made from cold rolled steel, 0.046" thick, zinc plated

### Base Plate 30x15 (2-pack)

- Designed to separate two parts from one another while creating a rigid connection. All VEX Standoffs have #8-32 threads.
  - Hex size is 0.250" across the flats.
  - Lightweight aluminum.
  - Various lengths available.

Standoff Pack (276-2013) contains:
- (4) 3" Standoffs
- (4) 2" Standoffs
- (8) 1" Standoffs
- (10) ½" Standoffs

### #8-32 Standoffs

<table>
<thead>
<tr>
<th>Length</th>
<th>Item Code</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>3&quot;</td>
<td>276-1013</td>
<td>$3.29</td>
</tr>
<tr>
<td>2&quot;</td>
<td>276-1014</td>
<td>$3.29</td>
</tr>
<tr>
<td>1&quot;</td>
<td>276-1015</td>
<td>$4.49</td>
</tr>
<tr>
<td>½&quot;</td>
<td>276-1016</td>
<td>$4.49</td>
</tr>
<tr>
<td>1.00&quot;</td>
<td>276-1017</td>
<td>$8.49</td>
</tr>
<tr>
<td>2.00&quot;</td>
<td>276-1018</td>
<td>$8.49</td>
</tr>
<tr>
<td>2.50&quot;</td>
<td>276-1019</td>
<td>$6.49</td>
</tr>
<tr>
<td>3.00&quot;</td>
<td>276-1020</td>
<td>$7.79</td>
</tr>
<tr>
<td>4.00&quot;</td>
<td>276-1021</td>
<td>$8.99</td>
</tr>
<tr>
<td>5.00&quot;</td>
<td>276-1022</td>
<td>$9.99</td>
</tr>
<tr>
<td>6.00&quot;</td>
<td>276-1023</td>
<td>$10.99</td>
</tr>
<tr>
<td>Standoff Pack</td>
<td>276-2013</td>
<td>$17.49</td>
</tr>
</tbody>
</table>

### Rubber Link (4-pack)

A flexible link used to create joints, springs, or to provide shock absorption.
- Flexible joints between standoffs or metal
- Add spring force to your design
- Provide shock absorption for delicate parts

Rubber Link (4-pack) 275-1029 $8.99

### Hinge (2-pack)

Simple pivoting joint with 265 degree movement.
- 2.5" long x 1.3" wide
- Standard VEX holes

Hinge (2-pack) 275-1272 $10.99
The Tool Kit contains all of the tools you will need to build with VEX EDR. The Open End Wrench fits VEX EDR nuts and standoffs, while the Hex Keys fit screws and shaft collars. The Performance Tool Kit contains tools that make working on your VEX EDR robot easier. If you’re using Star Drive screws or couplers, don’t forget to pick up Star Drive Keys or Screwdrivers to go along with them!

- Tool Kit 276-1382 $3.29
- Performance Tool Kit 276-1645 $43.29
- Open End Wrench (12-pack) 276-4350 $32.99
- 3/32” Hex Keys (8-pack) 275-1030 $5.29
- 5/64” Hex Keys (8-pack) 275-1031 $5.29
- T15 Star Drive Keys (8-pack) 276-5011 $8.99
- T8 Star Drive Keys (8-pack) 276-5012 $8.99
- T15 Star Screwdriver (5-pack) 276-5236 $16.99
- T8 Star Screwdriver (5-pack) 276-5013 $16.99

Cuttable and compressible high friction mats. Use for adding grip, friction, or padding.

- Available in two types, thin or thick
- Size is 12” x 15”

- Thin Anti-Slip Mat 275-0121 $2.29
- Thick Anti-Slip Mat 275-0130 $2.29

Use the Robotics Engineering Notebook to document the design, construction and iteration of a classroom or competitive robot.

- (130) Blank Entry pages
- 3-hole drilled for binder storage
- Commonly used formulas and rulers available for easy reference

Robotics Engineering Notebook 276-3023 $10.99

Great for quickly mounting objects. Wrap the Cinch Strap around the object you want mounted, loop it through the buckle, and then back onto itself for a secure hold using VELCRO® brand hook and loop fastener. The buckle allows the user to “cinch” the strap tight around the application.

- Quickly mount an object
- Adjustable and reusable
- Secure holding circumference approximately 4” to 7”

Cinch Strap (5-pack) 275-1258 $10.99

1/8″ thick foam with adhesive on one side that can be used for robot bumpers, vibration isolation, accumulator backing, and any other applications requiring compressive padding.

- 1” wide x 0.250” thick
- 60” long (cuts with scissors)
- Adhesive backed

Adhesive Foam 275-1254 $10.99

This VEX tubing can stretch up to 3 times its length and still spring back to its original shape. VEX Latex Tubing is great for any application on a VEX robot requiring spring loading.

- Sold in two 5’ lengths
- 35A durometer Latex
- Great for heavy lifting

Latex Tubing (10’) 275-1262 $10.99

VELCRO® brand ONE-WRAP™ that can be used to attach a light object. This wrap comes with Hook on one side and Loop on the other so that it attaches back to itself for an easy and secure closed loop.

Note: Not legal for use in the VEX Robotics Competition.

- #32 rubber bands are 3” x 1/8”
- #64 rubber bands are 3.5” x 1/4”

VELCRO® Brand ONE-WRAP® (5’) 275-1259 $5.99

VELCRO® Brand Adhesive Strip (5’)

- Adhesive backing
- Attach a light object like a battery
- Build a trap door or a detachable part

VELCRO® Brand Adhesive Strip (5’) 275-1257 $10.99

VEX Synthetic Rubber Bands have dozens of uses on a robot. Their spring-like properties make them perfect for latches, triggers, and return mechanisms.

- #32 rubber bands are 3” x 1/8”
- #64 rubber bands are 3.5” x 1/4”

Latex Free Rubber Band #32 (20-pack) 275-1089 $1.99
Latex Free Rubber Band #64 (10-pack) 275-3990 $3.99
Silicone Rubber Band #32 (10-pack) 228-6633 $7.99
Silicone Rubber Band #64 (10-pack) 228-6634 $5.99

Can be used to hold together and manage cables, or to attach larger objects (like pneumatic cylinders) to metal.

- 4” Zip Ties (100-pack) 276-1032 $5.99
- 11” Zip Ties (100-pack) 275-0125 $7.99

This adhesive VELCRO® Brand product has an adhesive backing so it can be attached directly to metal to hold a lightweight object like a battery, create a trap door, or build a detachable part.

Note: Not legal for use in the VEX Robotics Competition.

- Adhesive backing
- Attach a light object like a battery
- Build a trap door or a detachable part

VELCRO® Brand Adhesive Strip (5’) 275-1257 $10.99

VELCRO® Brand ONE-WRAP® (5’) 275-1259 $5.99

Ribbons

Rubber Bands

Zip Ties

Safety Glasses

Velcro Brand

Adhesive Foam

Robotics Engineering Notebook

Other
Competition Products

VEX Robotics Competition Trophies

Looking to purchase extra trophies for your teammates, schools or sponsors? 10" and 12" trophies are available for all of the standard VRC awards given out at tournaments.

**NOTE:** The Award Plate and the Award Date Plate are shipped separately. For complete trophies, be sure to order both the necessary Award Plates and Award Date Plates.

- Official VEX Trophies
- Award Plates with a variety of awards

1. 10" VRC Trophy Pack (Award Plate not included) 276-1309 $39.99
2. 12" VRC Trophy Pack (Award Plate not included) 276-1310 $44.99
- Award Plate "Excellence"
- Award Plate "Tournament Champion"
- Award Plate "Tournament Finalist"
- Award Plate "Robot Skills Champion"
- Award Plate "Robot Skills 2nd Place"
- Award Plate "Think"
- Award Plate "Create"
- Award Plate "Build"
- Award Plate "Amaze"
- Award Plate "Innovate"
- Award Plate "Teamwork"
- Award Plate "Educate"
- Award Plate "Future"
- Award Plate "Judge’s Award"
- Award Plate "Energy"
- Award Plate "Sportsmanship"
- Award Plate "Survival"
- Award Plate "Community"
- Award Plate "Design"
- Award Plate "Promote"
- Award Plate "Invention"
- Award Plate "Mentor of the Year"
- Award Plate "Teacher of the Year"
- Award Plate "Volunteer of the Year"
- Blank Award Plate

Competition Field Perimeter

The official VEX Robotics Competition field is set up on a foam surface with a sheet-metal and lexan perimeter frame. Inside this perimeter, game-specific elements can be added.

- The Competition Field Perimeter Kit includes ALL parts and lexan required for frame assembly and two driver-control posts, and does NOT include Field Tiles or electronics.
- Spare components available separately

**Competition Field Perimeter Kit**

- 278-1501 $799.99
- 275-1182 $10.99
- 275-1183 $10.99
- 275-1185 $10.99
- 275-1202 $16.99
- 275-1208 $39.99
- 276-3295 $54.99
- 276-5156 $10.99
- 276-4604 $43.99

**Competition Field Tile Kit**

Comes with enough 2' x 2' interlocking foam tiles to fill one standard sized VEX Robotics Competition field.

- (2) Grey
- (2) Red
- (2) Blue

**Competition Field Perimeter Kit**

- 278-1502 $229.99

**VRC License Plate Kit**

License plates and identification numbers for teams competing in the VEX Robotics Competition.

- (2) Blue VRC License Plate
- (2) Red VRC License Plate
- (4) VRC License Plate Number Sheet
- (2) VRC License Plate Alphabet Sheet
- Red & blue colors serve as alliance indicators as well as ID plates
- Attaches using standard VEX EDR screws and nuts or VEX IQ pins
- Plates come blank and are fully customizable

**VRC License Plate Kit**

- 276-3938 $5.49

**Competition Field Monitor Stand**

This bracket allows you to mount an LCD monitor onto the VEX field perimeter, either on a corner or at the center of a wall panel.

**On-Field Robot Expansion Sizing Tool**

Use this product to inspect whether a VRC Robot fits into the starting configuration of 18” while not exceeding the maximum expansion limit of 36”.

**On-Field Robot Sizing Tool**

- 276-5942 $43.99

**Competition Field Corner Bracket (4-pack)**

Replacements for the “top and bottom” plates which join the corners of the VEX Robotics Competition Field Perimeter Kit.

**Competition Field Corner Bracket (4-pack)**

- 276-4604 $43.99

**Competition Products**

Looking to purchase extra trophies for your teammates, schools or sponsors? 10" and 12" trophies are available for all of the standard VRC awards given out at tournaments.

**NOTE:** The Award Plate and the Award Date Plate are shipped separately. For complete trophies, be sure to order both the necessary Award Plates and Award Date Plates.

- Official VEX Trophies
- Award Plates with a variety of awards

1. 10" VRC Trophy Pack (Award Plate not included) 276-1309 $39.99
2. 12" VRC Trophy Pack (Award Plate not included) 276-1310 $44.99
- Award Plate "Excellence"
- Award Plate "Tournament Champion"
- Award Plate "Tournament Finalist"
- Award Plate "Robot Skills Champion"
- Award Plate "Robot Skills 2nd Place"
- Award Plate "Think"
- Award Plate "Create"
- Award Plate "Build"
- Award Plate "Amaze"
- Award Plate "Innovate"
- Award Plate "Teamwork"
- Award Plate "Educate"
- Award Plate "Future"
- Award Plate "Judge’s Award"
- Award Plate "Energy"
- Award Plate "Sportsmanship"
- Award Plate "Survival"
- Award Plate "Community"
- Award Plate "Design"
- Award Plate "Promote"
- Award Plate "Invention"
- Award Plate "Mentor of the Year"
- Award Plate "Teacher of the Year"
- Award Plate "Volunteer of the Year"
- Blank Award Plate

Competition Field Perimeter

The official VEX Robotics Competition field is set up on a foam surface with a sheet-metal and lexan perimeter frame. Inside this perimeter, game-specific elements can be added.

- The Competition Field Perimeter Kit includes ALL parts and lexan required for frame assembly and two driver-control posts, and does NOT include Field Tiles or electronics.
- Spare components available separately

**Competition Field Perimeter Kit**

- 278-1501 $799.99
- 275-1182 $10.99
- 275-1183 $10.99
- 275-1185 $10.99
- 275-1202 $16.99
- 275-1208 $39.99
- 276-3295 $54.99
- 276-5156 $10.99
- 276-4604 $43.99

**Competition Field Tile Kit**

Comes with enough 2' x 2' interlocking foam tiles to fill one standard sized VEX Robotics Competition field.

- (2) Grey
- (2) Red
- (2) Blue

**Competition Field Tile Kit**

- 278-1502 $229.99

**VRC License Plate Kit**

License plates and identification numbers for teams competing in the VEX Robotics Competition.

- (2) Blue VRC License Plate
- (2) Red VRC License Plate
- (4) VRC License Plate Number Sheet
- (2) VRC License Plate Alphabet Sheet
- Red & blue colors serve as alliance indicators as well as ID plates
- Attaches using standard VEX EDR screws and nuts or VEX IQ pins
- Plates come blank and are fully customizable

**VRC License Plate Kit**

- 276-3938 $5.49

**Competition Field Monitor Stand**

This bracket allows you to mount an LCD monitor onto the VEX field perimeter, either on a corner or at the center of a wall panel.

**On-Field Robot Expansion Sizing Tool**

Use this product to inspect whether a VRC Robot fits into the starting configuration of 18” while not exceeding the maximum expansion limit of 36”.

**On-Field Robot Sizing Tool**

- 276-5942 $43.99

**Competition Field Corner Bracket (4-pack)**

Replacements for the “top and bottom” plates which join the corners of the VEX Robotics Competition Field Perimeter Kit.

**Competition Field Corner Bracket (4-pack)**

- 276-4604 $43.99
All prices shown are in US Dollars and valid for US customers only. International pricing and availability varies by location.
Browse more **products**, **builds**, **educational curriculum**, and **competition information** at vexedr.com