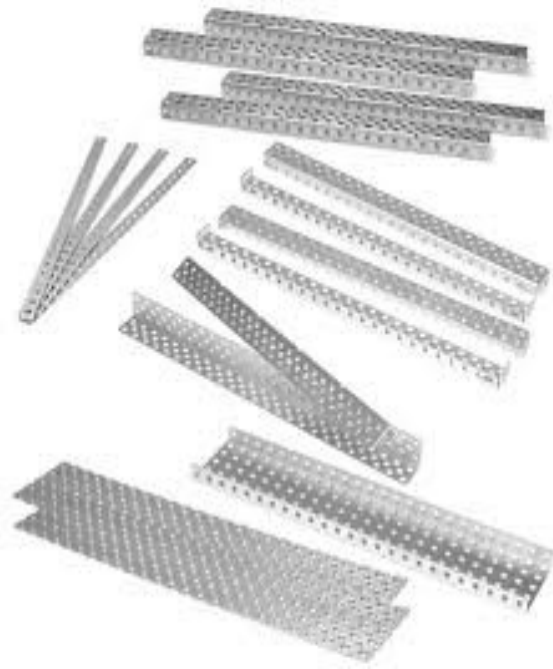


VEX Robotics Parts Identification

أهم مسميات القطع الرئيسية
في تركيب الروبوت VEX V5

46. **structure parts**
- **structure system**



Structural parts used to construct the chassis, levers, and sub systems.

42. **shaft coupler - motion subsystem**



A motor system part used in between the motor the drive shaft.

36. **parts container**

Plastic parts storage container used to keep robot parts separated and ready for use.



37. **plate structure - structure system**

A flat structural part used to provide a mounting surface for other robot parts.

1. **angle structure - structure system**



An "L" shaped structure part used to form the "skeleton" of the robot.

5. **bearing (flat) - motion subsystem**



A commonly used type of bearing in the VEX system. This bearing has three holes in a row. An axle is passed through the center hole which allows it to spin freely.

2. **axle - motion subsystem**



A long, rigid piece through the rotational center of an object (like a gear or wheel). Square bars are usually used as axles in the VEX system.

6. **bearing (pillow block) - structure subsystem**



A piece that is used to hold a moving piece (such as an axle) in place relative to the rest of the system.

7. **bearing pop-rivet - structure system**



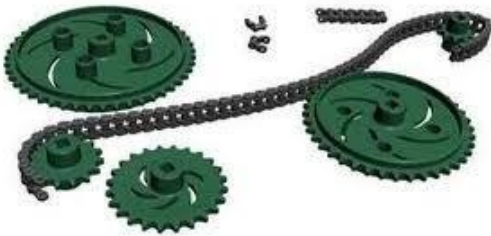
A plastic fastener system consisting of two parts and used to hold the VEX bearing Flat part in place on the structure system.

10. **c-channel - structure system**



A structure system beam used to form the "skeleton" of the robot.

11. **chain and sprocket - motion subsystem**



Optional parts to provide a chain drive in the motion system of the robot.

14. **clutch - motion subsystem**



A detachable piece normally mounted to the VEX motors that protects them from shock loads.

15. **collar - structure subsystem**



A type of spacer that can be set to remain stationary at any given point along an axle.



40. **screw, hex -
structure
subsystem**

A screw with a hexagon-shaped hole in the head, allowing the screw to be tightened or loosened with a hex L wrench.

44. **spacer - structure
subsystem, motion
subsystem**



Plastic spacers which are designed to slide onto square bar axles between other parts (or between parts and rails) to keep them from moving too close together.

19. flexible structure - structure system



A flexible structure part used to form the "skeleton" of the robot or specialized applications.

22. gripper (claw kit) -



An attachment designed to pick up or hold an object, often by "gripping" it with claw-like appendages.

23. gusset - structure subsystem



A piece used to strengthen an angled joint.

24. hex L wrench



An L-shaped tool used to work with hex screws.

27. KEPS Nut - structure subsystem



A standard nut that includes a toothed "crown" designed to bite into a mounting surface and prevent the nut from slipping.

28. lever - structure system

One of six "simple machines" that provides a mechanical advantage. There are three main classes of levers with subtle differences, but in general, they are long pieces that rotate around any point on their length.

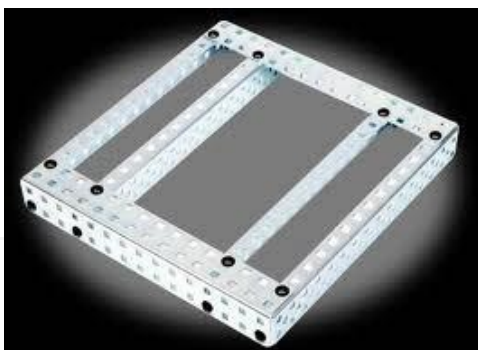


12. chassis rail - structure system



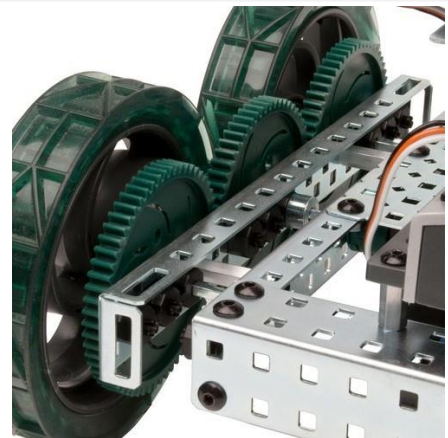
A structure system beam used to form the "skeleton" of the robot.

13. chassis - structure subsystem, motion subsystem



A vehicle's basic structural frame, plus its locomotion systems.

16. drive train - motion system



All the parts involved in the primary locomotion system of a robot, including the motors, gears, axles, and wheels.

17. fastener - structure subsystem



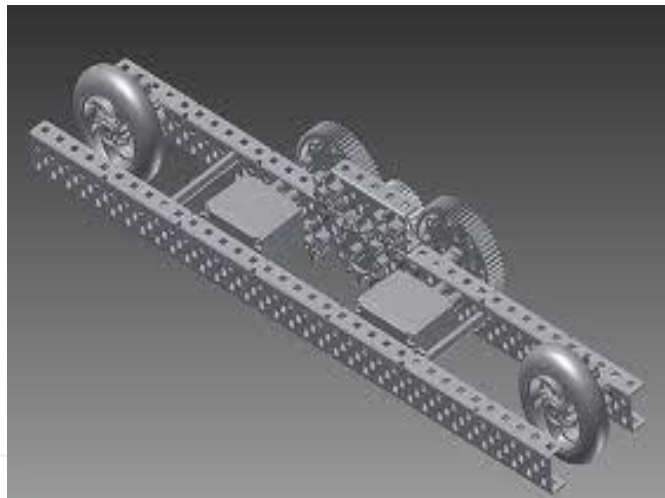
Screws, nuts, and washers in various diameters and lengths for connecting structure and attachment parts to the robot.

20. **gear -
motion subsystem**



Spinning discs with teeth that prevent them from slipping past each other. Gears are frequently used to transfer rotational motion from one piece to another, and to provide mechanical advantage while doing so.

21. **gear train
- motion subsystem**



A group of gears that turn together to transmit motion from one point to another on the robot, often providing mechanical advantage along the way.

25. idler gear - motion subsystem



A gear in the gear train that is neither the driven nor the driving gear, and does not share an axle with another gear in the train.

29. limit switch sensor - sensor subsystem



A small contact-sensitive sensor that is most often used for internal regulation of movement. This is a digital sensor.

30. microcontroller back up battery holder - power subsystem



59. **worm gear - motion subsystem**

An optional gear part used to provide advanced gear applications.



58. **wheel - motion subsystem**

Wheels of different diameters and tread type for providing motion or a specific task on the robot.

60. **zip-tie -**

A plastic tie for securing wires or other parts to the robot.



47. tank track kit -



Optional parts kit to provide tank track motion on th

49. threaded - structure subsystem



A threaded piece that has threading on it or in it, which allows a screw to be fastened into it.

50. tool kit



Tools used to assemble the robot, includes two allen wrenches and a wrench.



One of two robots that can be built with the VEX Robot Starter Bundle kit.

57. **VEX USB adapter key - logic system**

The VEXnet 802.11g key provides communication between the VEX Cortex Microcontroller and the VEXnet Joystick.

48. **tether - control subsystem**



A cable used to connect the Transmitter directly to th