

2014 BEST Consumable Kit List (provided by hub)

| Type | Check | Qty | Item Description |
|-------------------------|-------|-------------------------------------|--|
| igus® Donated Parts | | 1 meter | Energy Chain, P/N E2-15-20-028-0, w/ 2 each mounting brackets (P/N E2.150.20.1 and .2) |
| | | 2 ea | DryLin® N Linear Guide system, P/N NK01-27-2-450 |
| | | 6 ea | igubal® Flange Mount Spherical Bearing, 1/4", P/N EFOI-04 |
| | | 6 ea | igubal® Pillow Block Mount Spherical Bearing, 1/4", P/N KSTI-04 |
| | | 6 ea | iglide® G300 Flanged Bushing, 1/4", P/N GFI-0405-06 |
| | | 6 ea | igubal® 1/4" Rod End Bearing, 1/4"-28 Thread, P/N EBRI-04 |
| | | 2 ea | DryLin® S, 1/4" diameter, hard anodized Aluminum Shaft, P/N AWI-04, 18 inch length |
| Plastic and Metal Stock | | 1 ea | 1/4" thick polypropylene sheet 12" X 24" |
| | | 1 ea | 1/8" thick PVC Type 1 sheet 12" X 24" |
| | | 1 ea | 0.5" thick X 2" wide 6061-T6 aluminum flat, 12" long |
| | | 1 ea | 0.063" thick 5052-H32 aluminum sheet, 12" x 24" |
| | | 1 ea | 0.5" diameter 6061-T6 aluminum round, 24" long |
| | | 2 ea | 0.25" diameter AISI 1018 steel round, 24" long |
| | | 3 ea | piano wire, 0.063" diameter, 2' long |
| Wood Stock | | 1 ea | 15/32" or 1/2" thick, BC grade, 2'X4' plywood |
| | | 1 ea | 11/32" or 3/8" thick, 2'X4' plywood, BC or Luan grade |
| | | 1 ea | 5 mm thick Luan grade, or 7/32" or 1/4" thick BC grade, 2'X4' plywood |
| | | 2 ea | 1" X 4" #2 whitewood, 2 ft long |
| | | 1 ea | 1/4" X 48" hardwood dowel |
| | | | |
| PVC Pipes and Fittings | | 4 ea | 1/2" schedule 40 PVC pipe, 5 ft long |
| | | 2 ea | 3/4" schedule 40 PVC pipe, 5 ft long |
| | | 2 ea | 1" schedule 40 PVC pipe, 5 ft long |
| | | 1 ea | 4" PVC solid sewer pipe, SDR 35 or ASTM D2729, 3 ft long (without integral coupling) |
| | | 10 ea | 1/2" PVC 90 degree elbow (slip) |
| | | 10 ea | 1/2" PVC tee (slip) |
| | | 10 ea | 3/4" PVC 90 degree elbow (slip) |
| | | 10 ea | 3/4" PVC tee (slip) |
| | | 6 ea | 1" PVC 90 degree elbow (slip) |
| | | 6 ea | 1" PVC tee (slip) |
| | | | |
| | | 1 ea | regular PVC cement, 4 oz or 8 oz |
| Hardware | | 4 ea | 2.5" X 5/8" steel ZN, corner angle bracket |
| | | 4 ea | 2" X 3/8" steel ZN, flat angle bracket |
| | | 2 ea | 2.5"H X 1.75"W X 0.055" narrow hinge w/removable pin |
| | | 2 ea | 1.5"H X 1-3/8"W X 0.05" narrow hinge w/nonremovable pin & 4 screws |
| | | 1 ea | extension spring for heavy doors, 13/32"OD, 0.0625" wire diameter, steel |
| | | 1 ea | 6" x 6" steel turntable, 500 lb capacity |
| | | 1 ea | 3/4" metal pipe hanger tape, 28 gauge, 10 ft long |
| | | | |
| Electrical | | 12 ft | 18 gauge stranded copper wire, red insulation, single conductor |
| | | 12 ft | 18 gauge stranded copper wire, black insulation, single conductor |
| | | 12 ft | CAT3 24 gauge, 4 twisted pairs of conductor wire |
| | | 16 ea | snap-plug terminals (bullet connectors), insulated, male (optional*) |
| | | 16 ea | snap-plug terminals (socket for bullet connectors), insulated, female (optional*) |
| | | 20 ea | quick-disconnect terminal, insulated, female, 0.11" wide (optional*) |
| | | 10 ea | quick-disconnect terminal, insulated, female, 0.187" wide (optional*) |
| | | 4 ea | sub-mini snap action switch, SPDT, 0.1 A, Omron P/N SS-01GL13PT |
| | | 2 ea | rotary potentiometer, linear, 10K ohm, 300°, panel mount, 6mm (approx.) shaft |
| | | 2 ft | heat shrink tubing, 1/4" OD expanded, 2:1 ratio, polyolefin, black |
| | | 10 ea | 11" long x 0.18" wide nylon cable tie |
| | 20 ea | 4" long x 0.1" wide nylon cable tie | |
| Tapes and Adhesives | | 1 ea | vinyl electrical tape, 3/4" wide, 60 ft |
| | | 1 ea | friction tape, 3/4" wide, 60 ft |
| | | 1 ea | all purpose duct tape, 2" (or 1.88") wide, 50 to 60 yd, (color optional) |
| | | 1 ea | painters tape, 1" (or 0.94") wide, 30 to 60 yd. |
| | | 1 ea | carpenters wood glue, 4 oz |
| | | 1 ea | 5 minute epoxy, 0.85 oz |

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| Threaded Fasteners | | 1 ea | 1/4"-20 threaded rod, 3' long, steel | |
| | | 25 ea | 1/4"-20 hex nut, steel | |
| | | 25 ea | 1/4" SAE flat washer, steel | |
| | | 25 ea | 1/4" medium split lock washer, steel | |
| | | 6 ea | 1/4-28 x 1" screw, nylon (mates with igus rod end) | |
| | | 6 ea | #10-32 x 3/4" socket head, high strength (150 KSI min) steel screws | |
| | | 25 ea | #10-32 X 1 1/2" machine screws, steel, round head, phillips | |
| | | 25 ea | #10-32 machine screw nuts, steel | |
| | | 25 ea | #10 flat washer, steel | |
| | | 100 ea | #8-32 X 1 1/4" machine screw, steel, pan head, phillips | |
| | | 100 ea | #8-32 machine screw nuts, steel | |
| | | 25 ea | #8 medium split lock washer, steel | |
| | | 25 ea | #4-40 X 1" machine screws, round head, steel | |
| | | 25 ea | #4-40 machine screw nuts, steel | |
| | | 10 ea | #2-56 X1" machine screws, pan head, phillips, stainless | |
| | | 10 ea | #2-56 machine screw nuts, 3/16x1/16, steel | |
| | | 10 ea | #2 flat washer, steel | |
| | | 10 ea | wood screw eyebolts, 0.192 wire dia x .97 shank x .75 thread x .27 id, steel | |
| | Miscellaneous | | 5 ft | 3/4" nylon sticky back hook and loop fastener |
| | | | 1 ea | #18 twisted nylon seine twine, 225 to 250 ft long (color optional) |
| | | 4 ft | 1/4" polypropylene covered shock cord (color optional) | |
| | | 2 ft | 3/8" thick, 1" wide, adhesive backed, gum rubber strip | |
| | | 1 ea | bicycle inner tube (26" X 1.5" to 2.00") | |
| | | 1 ea | 60x65" universal brake cable with housing (white or black) | |
| | | 25 ea | #10 Rubber Band (1/16" wide x 1-1/4" long) | |
| | | 25 ea | #32 Rubber Band (1/8" wide x 3" long) | |
| | | 100 ea | 1 1/4" long paper clips, 0.033 dia wire (No. 1 Regular) | |
| | | 1 ea | VEX motor mounting kit (4 mounts + screws) | |

Approved Optional Items (provided by team) **

| Qty | Item Description |
|------------|---|
| 10 ea | wooden spring type clothes pins |
| 2400 sq in | corrugated cardboard, 1/4" maximum thickness |
| 2 ea | empty aluminum soft drink cans (12 fl. oz.) |
| 1 ea | empty food/beverage PETE container with screw on cap/lid (2 liter max.) *** |
| 3 ea | wire coat hangers with or without plastic coating, 1/8" dia. max. |
| 3 ea | solid core golf balls |
| 1 ea | 5 minute epoxy, 0.85 oz |
| 3 ea | ~10oz empty metal soup can with lid removed |
| 24 lb | pennies (cannot be altered) |
| 1 ea | 4 oz. PVC primer |
| 144 sq in | heavy duty aluminum foil |
| 6 ea | wooden golf tees (3.5" long max.) |
| 36 ea | craft "Popsicle" sticks (maximum dimensions; 4.75" long, 0.44" wide, 0.10" thick) |
| 1 ea | aluminum paint grid for 5 gallon bucket |
| 1 ea | inner tube repair kit |
| 4 ea | compact disk (standard size: 120mm diameter x 1.2 mm thick) |

Notes: * Teams may use these optional items even if they are not supplied by the hub.

** The identified Team Supplied (Optional Items) can be used *in addition* to the items that are supplied by the hub.

*** PET or PETE (polyethylene terephthalate) is identified by a number 1 recycling symbol. Typical examples of PETE containers are soft drink bottles or a container for peanuts.