

## 2014 BEST Consumable Kit List (provided by hub)

Type	Check	Qty	Item Description
igus® Donated Parts	1	1 meter	Energy Chain, P/N E2-15-20-028-0, w/ 2 mounting brackets (P/N E2.150.20.1 and .2)
	2	2 ea	DryLin® N Linear Guide system, P/N NK01-27-2-450
	3	6 ea	igubal® Flange Mount Spherical Bearing, 1/4", P/N EFOI-04
	4	6 ea	igubal® Pillow Block Mount Spherical Bearing, 1/4", P/N KSTI-04
	5	6 ea	iglide® G300 Flanged Bushing, 1/4", P/N GFI-0405-06
	6	6 ea	igubal® 1/4" Rod End Bearing, 1/4"-28 Thread, P/N EBRI-04
	7	2 ea	DryLin® S, 1/4" diameter, hard anodized Aluminum Shaft, P/N AWI-04, 18 inch length
Plastic and Metal Stock	8	1 ea	1/4" thick polypropylene sheet 12" X 24"
	9	1 ea	1/8" thick PVC Type 1 sheet 12" X 24"
	10	1 ea	0.5" thick X 2" wide 6061-T6 aluminum flat, 12" long
	11	1 ea	0.063" thick 5052-H32 aluminum sheet, 12" x 24"
	12	1 ea	0.5" diameter 6061-T6 aluminum round, 24" long
	13	2 ea	0.25" diameter AISI 1018 steel round, 24" long
	14	3 ea	piano wire, 0.063" diameter, 2' long
Wood Stock	15	1 ea	15/32" or 1/2" thick, BC grade, 2'X4' plywood
	16	1 ea	11/32" or 3/8" thick, 2'X4' plywood, BC or Luan grade
	17	1 ea	5 mm thick Luan grade, or 7/32" or 1/4" thick BC grade, 2'X4' plywood
	18	2 ea	1" X 4" #2 whitewood, 2 ft long
	19	1 ea	1/4" X 48" hardwood dowel
PVC Pipes and Fittings	20	4 ea	1/2" schedule 40 PVC pipe, 5 ft long
	21	2 ea	3/4" schedule 40 PVC pipe, 5 ft long
	22	2 ea	1" schedule 40 PVC pipe, 5 ft long
	23	1 ea	4" PVC solid sewer pipe, SDR 35 or ASTM D2729, 3 ft long (without integral coupling)
	24	10 ea	1/2" PVC 90 degree elbow (slip)
	25	10 ea	1/2" PVC tee (slip)
	26	10 ea	3/4" PVC 90 degree elbow (slip)
	27	10 ea	3/4" PVC tee (slip)
	28	6 ea	1" PVC 90 degree elbow (slip)
	29	6 ea	1" PVC tee (slip)
	30	1 ea	regular PVC cement, 4 oz or 8 oz
Hardware	31	4 ea	2.5" X 5/8" steel ZN, corner angle bracket
	32	4 ea	2" X 3/8" steel ZN, flat angle bracket
	33	2 ea	2.5"H X 1.75"W X 0.055" narrow hinge w/removable pin
	34	2 ea	1.5"H X 1-3/8"W X 0.05" narrow hinge w/nonremovable pin & 4 screws
	35	1 ea	extension spring for heavy doors, 13/32"OD, 0.0625" wire diameter, steel
	36	1 ea	6" x 6" steel turntable, 500 lb capacity
	37	1 ea	3/4" metal pipe hanger tape, 28 gauge, 10 ft long
Electrical	38	12 ft	18 gauge stranded copper wire, red insulation, single conductor
	39	12 ft	18 gauge stranded copper wire, black insulation, single conductor
	40	12 ft	CAT3 24 gauge, 4 twisted pairs of conductor wire
	41	16 ea	snap-plug terminals (bullet connectors), insulated, male (optional*)
	42	16 ea	snap-plug terminals (socket for bullet connectors), insulated, female (optional*)
	43	20 ea	quick-disconnect terminal, insulated, female, 0.11" wide (optional*)
	44	10 ea	quick-disconnect terminal, insulated, female, 0.187" wide (optional*)
	45	4 ea	sub-mini snap action switch, SPDT, 0.1 A, Omron P/N SS-01GL13PT
	46	2 ea	rotary potentiometer, linear, 10K ohm, 300°, panel mount, 6mm (approx..) shaft
	47	2 ft	heat shrink tubing, 1/4" OD expanded, 2:1 ratio, polyolefin, black
	48	10 ea	11" long x 0.18" wide nylon cable tie
	49	20 ea	4" long x 0.1" wide nylon cable tie
Tapes and Adhesives	50	1 ea	vinyl electrical tape, 3/4" wide, 60 ft
	51	1 ea	friction tape, 3/4" wide, 60 ft
	52	1 ea	all purpose duct tape, 2" (or 1.88") wide, 50 to 60 yd, (color optional)
	53	1 ea	painters tape, 1" (or 0.94") wide, 30 to 60 yd.
	54	1 ea	carpenters wood glue, 4 oz
	55	1 ea	5 minute epoxy, 0.85 oz

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Type	Check	Qty	Item Description
Threaded Fasteners	56	1 ea	1/4"-20 threaded rod, 3' long, steel
	57	25 ea	1/4"-20 hex nut, steel
	58	25 ea	1/4" SAE flat washer, steel
	59	25 ea	1/4" medium split lock washer, steel
	60	6 ea	1/4-28 x 1" screw, nylon (mates with igus rod end)
	61	6 ea	#10-32 x 3/4" socket head, high strength (150 KSI min) steel screws
	62	25 ea	#10-32 X 1 1/2" machine screws, steel, round head, phillips
	63	25 ea	#10-32 machine screw nuts, steel
	64	25 ea	#10 flat washer, steel
	65	100 ea	#8-32 X 1 1/4" machine screw, steel, pan head, phillips
	66	100 ea	#8-32 machine screw nuts, steel
	67	25 ea	#8 medium split lock washer, steel
	68	25 ea	#4-40 X 1" machine screws, round head, steel
	69	25 ea	#4-40 machine screw nuts, steel
	70	10 ea	#2-56 X1" machine screws, pan head, phillips, stainless
	71	10 ea	#2-56 machine screw nuts, 3/16x1/16, steel
	72	10 ea	#2 flat washer, steel
	73	10 ea	wood screw eyebolts, 0.192 wire dia x .97 shank x .75 thread x .27 id, steel
	74	100 ea	#8 X 1" sheet metal screw, steel, hex head
	75	100 ea	#6 X 1" wood screws, steel, flat head
	76	25 ea	#4 X 3/4" wood screw, steel, slotted drive, round head
Miscellaneous	77	5 ft	3/4" nylon sticky back hook and loop fastener
	78	1 ea	#18 twisted nylon seine twine, 225 to 250 ft long (color optional)
	79	4 ft	1/4" polypropylene covered shock cord (color optional)
	80	2 ft	3/8" thick, 1" wide, adhesive backed, gum rubber strip
	81	1 ea	bicycle inner tube (26" X 1.5" to 2.00")
	82	1 ea	60x65" universal brake cable with housing (white or black)
	83	25 ea	#10 Rubber Band (1/16" wide x 1-1/4" long)
	84	25 ea	#32 Rubber Band (1/8" wide x 3" long)
	85	100 ea	1 1/4" long paper clips, 0.033 dia wire (No. 1 Regular)
	86	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.