

FLEX CRAFT

Material Handling Solutions

MATERIAL HANDLING CATALOG

- Build in minutes
- One tool
- Precut sizes
- Change and evolve

Top 10 Reasons why you should use Flex Craft

- **Fast Assembly**
You can start building right off the pallet! A ½” wrench, an idea and a couple of minutes until your project is ready.
- **Fast Design**
Even though most sketches will do the job, Flex Craft offers a FREE design program that is easy to use, just copy and paste.
- **Fast Shipping**
The standard lead time on most orders is 2 days or less! Order by the project or establish a stocking inventory.
- **Friendly System**
The Flex Craft bolt together system is so easy to construct, almost anyone can build their own custom solutions!
- **Friendly Components**
With Flex Craft’s standard precut sizes, you don’t have to cut tubing.
- **Friendly Support**
Whether you’re a first time Flex Craft user or a seasoned veteran, our Sales Engineers are here to help.
- **Friendly Pricing**
Using a different product or method? Ask us for a competitive quote and see why so many companies have made the switch.
- **Flexible Framing**
Flexible in design only. Flex Craft’s square tubing is made from 16 gauge steel that bolts together. Our product is built fast and made to last!
- **Flexible ROI**
Flex Craft is 100% reusable. Simply take the old project apart and reconfigure to build your new solution.
- **Flexible Configurations**
How many different projects can you create? The answer is endless.

Fast, Friendly, Flexible, Flex Craft

Bring your creative continuous improvement ideas to life and become World Class with Flex Craft.



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Who We Are

About Our Business

Flex Craft was invented in 2006 by Doug Sparks (a Lean Practitioner) for O.E.M. and Custom Manufactures. Sparks saw a need for material handling solutions that could be easily assembled by anyone, without the use of a saw or expensive welding equipment and be configured or modified in minutes.

About Our Products

Flex Craft products are standardized so anyone can quickly and easily build their own custom solution using a 1/2" wrench.

"Be The Change" slogan

"Be the change" is part of a Gandhi quote –
"Be the change you expect in others".



Pictured above – Terri and Doug Sparks, Owners of Flex Craft



Pictured above – Flex Craft's Houston, MN Manufacturing Facility

Made in the USA





Direct Bolt Joint
3 Point Registration Automatically Squares



Universal Joint
Use to attach tubing at various angles
Part # 1400 (see order form for reference)



Flex Craft stock colors (pictured above) are ideal for 5S and color coding. Also available in custom colors, no paint, and aluminum

Tubing

Flex Craft Tubing is available in 16 gauge powder coated mild steel or clear coat anodized aluminum (Grade 6063).

The 1" square tube has 5/16" holes punched on all four sides. With holes starting approx. 1/2" from the end of the tube. The holes are spaced at 1" increments on all four sides throughout the length of the tube.

How to Order Tubing

By knowing the tube length and color/finish, ordering is easy. For example ordering a 16 gauge, 24" long tube, painted blue; the part number is 1624BL. See order form for reference.

The tubing is available in standardized pre-cut lengths (6" increments) from 6" – 120". The standard sizes minimize the need for cutting and makes recycling projects into new ideas easy.

Universal Joints

Flex Craft's Patented Universal Joint is available in 14 gauge powder coated mild steel, with strategic 5/16" holes punched on all four tabs.

The tabs allow the joint to be attached in a variety of applications including an overlap feature which enables the end user to attach Flex Craft Tubing at various angles and still offers the ability to recycle old projects into new ideas.

Flex Craft Stock Colors



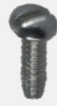
- Blue
- Green
- Orange
- Red
- White
- Yellow
- Gray
- Black

Common Fasteners



Common **Grade 2** Fasteners can be used with Flex Craft products in a variety of framing applications.

Bolts			Nuts and Washers				
Hex Cap Bolts			Nuts				
Description	Part #	Applications	Description	Part #	Applications		
	1 ½"	516x18x1122	U Joints and Framing		Hex Nut	516x182	Not recommended for mobile applications
	1 ¾"	516x18x1342	Plate Casters		Hex Nylon Lock Nut	516x182N	Recommended for mobile applications
	2"	516x18x22	Skate Wheels / Panels		Acorn Nut	Acorn Nut	Cover threads
	2 ¼"	516x18x2142	Acorn Nuts / Panels		Wing Nut	Wing Nut	Quickly change or hand tighten fasteners
	2 ½"	516x18x2122	2 Tube Frame	Washers			
	2 ¾"	516x18x2342	Panels / Plate Caster		Flat Washer	516FW	Plate Casters
	3"	516x18x32	Panel / Double Tube		Nylon Washer	516NW	Pivoting applications
	3 ½"	516x18x3122	3 Tube frame		Star Washer	516SW	ESD applications
	3 ¾"	516x18x3342	Panels / Plate Caster		Split Lock Washer	516SPLW	Lock Washer
	4 ½"	516x18x4122	4 Tube Frame				
	5 ½"	516x18x5122	5 Tube Frame				

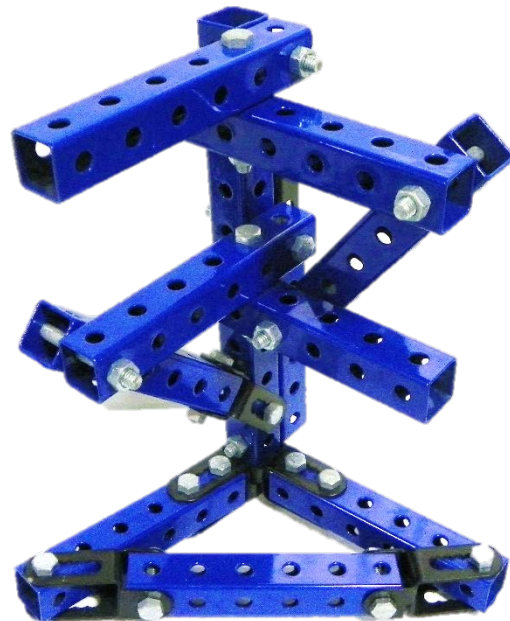
Specialized fasteners such as Grade 5, Grade 8, Zinc Plated and / or Stainless Steel fasteners are available as a special order request.

Screws			
Socket Head Cap Screw			
Description	Part #	Applications	
	¾"	516x34SHCS	Flush – see Technical
	1 ½"	516x112SHCS	Flush – see Technical
	2 ½"	516x212SHCS	Flush – see Technical
Allen Flat Head Screw			
Description	Part #	Applications	
	2"	516x2FHS	Countersink
	2 ½"	516x212FHS	Countersink
	3"	516x3FHS	Countersink
	3 ½"	516x312FHS	Countersink
Round Head Screw			
Description	Part #	Applications	
	1 ½"	516x18x1122 R	Smooth Round Head
	2 ½"	516x18x2122 R	Smooth Round Head
	3 ½"	516x18x3122 R	Smooth Round Head



Pins			
Pins			
Description	Part #	Applications	
	1 ½" Clevis Pin	516x112CP	Pivoting
	2 ¼" Clevis Pin	516x214CP	Pivoting
	Hitch Pin	38HP	Secures Clevis Pin

T-Handle Ball Release Pin		
Description	Part #	
	1 ½" T-Handle Ball Release Pin	T HandleBR112
	2 ½" T-Handle Ball Release Pin	T HandleBR212



CASTERS

Stem Casters and Inserts

Flex Craft Carries a full line of casters for mobile applications. Casters simply fasten to or into the tube. Casters are available in various materials, heights, widths, and weight load capacities.



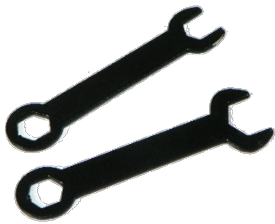
Stem Casters		
Description	Load Rating	Part #
3" Stem Caster W/Brake	120 lbs.	3PSC120B
3" Stem Caster	120 lbs.	3PSC120

Stem Casters are inserted into the end of the tube (with insert) or through the tubes hole.

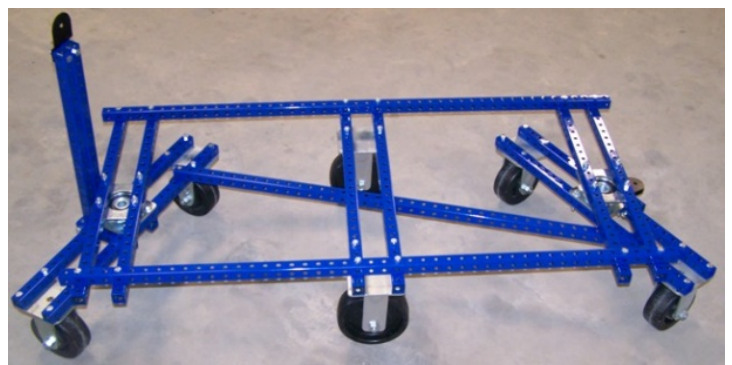


Inserts	
Description	Part #
Threaded Metal Insert	INSERT
Threaded Plastic Insert	PINSERT

Inserts are pushed into tube ends. Best used with Stem Casters and Nylon Glide Stems.



Wrench	
Description	Part #
½" Expandable Wrench	FCEW
Flex Craft Combo Wrench	FCCW



Non Marking Rubber and Polyolefin

Plate Casters bolt directly to two tubes set 3" apart. Expandable Stem Casters are inserted into the end of the tube. By tightening the hex nut, the rubber grommet expands and holds the caster in place.



Non Marking Rubber Donut Casters		
Description	Load Rating	Part #
3" Expandable Caster	300 lbs.	3GDEC300
3" Expandable Caster w/brake	300 lbs.	3GDEC300SB
5" Rigid Plate Caster	500 lbs.	5GDR500
5" Swivel Plate Caster	500 lbs.	5GDS500
5" Swivel Plate Caster W/Brake	500 lbs.	5GDSC500SB
6" Rigid Plate Caster	600 lbs.	6GDR600
6" Swivel Plate Caster	600 lbs.	6GDS600
6" Swivel Plate Caster W/Brake	600 lbs.	3GDEC300SB

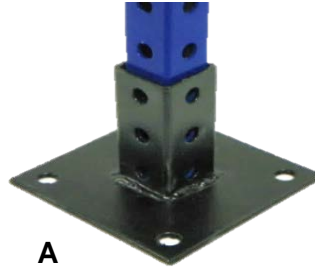


Polyolefin Casters		
Description	Load Rating	Part #
3" Expandable Caster W/Brake	250 lbs.	3PEC250B
3" Expandable Caster	250 lbs.	3PEC250
3" Swivel Plate Caster W/Brake	500 lbs.	3SPC500B
3" Swivel Plate Caster	500 lbs.	3SPC500
5" Swivel Plate Caster W/Brake	650 lbs.	5SPC650B
5" Swivel Plate Caster	650 lbs.	5SPC650
5" Rigid Plate Caster	650 lbs.	5RPC650
6" Swivel Plate Caster W/Brake	750 lbs.	6SPC750B
6" Swivel Plate Caster	750 lbs.	6SPC750
6" Rigid Plate Caster	750 lbs.	6RPC750

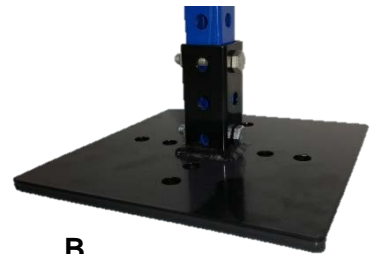
CASTERS

CH2LEK2

Floor Locks & Footers



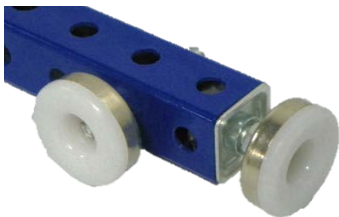
A



B

Footer		
Letter	Description	Part #
A	Footer Plate 4"x4"	Footer
B	Large Footer Plate 7.5"x7.5"	LGFooter

Footers can be used with Plate Casters, telescoping applications, and floor mounting. Available in black only.



Nylon Glide Stems		
Description	Load Rating	Part #
Nylon Glide Stem	250lbs.	NGS

Nylon Glide Stems can be inserted into the end of the tube (with Insert) or through the tube hole.



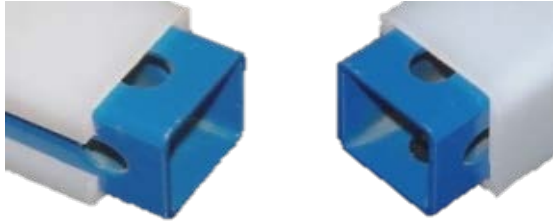
Floor Locks		
Description	Load Rating	Part #
5" Floor Lock	650 lbs.	5FL
6" Floor Lock	750 lbs.	6FL

Floor Locks bolt directly to two tubes set 3" apart.

CONVEYORS

CONVEYORS

Snap On & Slippery Tape



Snap On	
Description	Part #
UHMW Snap On Plastic Rail 60" in length	SNAP
Snap On uses surface tension to allow products to slide into position. Cuts easily and can be mounted by snapping over Tubing. Great for protecting painted parts.	

Slippery Tape	
Description	Part #
1" Wide Teflon Tape 18 yard roll	SSTAPE1
Slippery Tape use surface tension to allow products to slide into position. Cuts easily with a scissors and can be directly applied to Tubing. Great for conveying boxes and totes.	



CONVEYORS

Slider



Slider

Description	Part #
24"W x 72"L sheet. Slide direction is length	Slide
24"W Custom sizes and colors available upon request	
Double Sided Tape	DB TAPE
<p>Sliders use surface tension and gravity to allow product to slide into position. Cuts easily with a utility knife and can be mounted with double side tape or drilled and bolted to tube. The Slider grooves allow excellent product tracking into place without dividers.</p>	

CONVEYORS

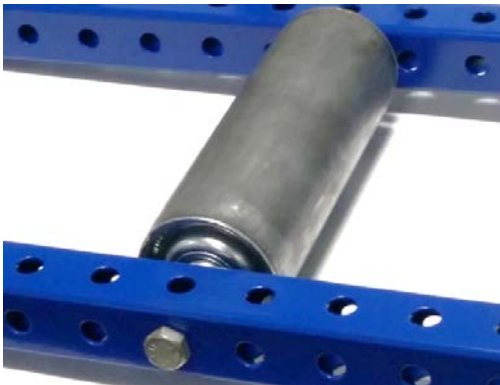
Micro Wheel & Spring Loaded Roller



Spring Loaded Conveyor

Description	Part #
6" Wide Spring	6SLC
12" Wide Spring	12SLC

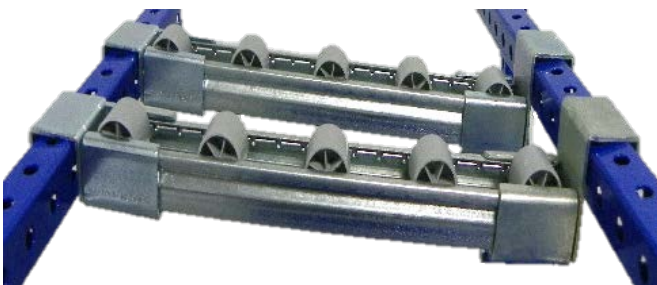
Spring loaded tube conveyor that has a 5/16" spring loaded shaft that plugs into the hole. Best used as a Point of Use Conveyor. Plug and play as needed.



Bolt Thru Conveyor

Description	Part #
1.9"x6" Long bolt thru conveyor	6BTC

Bolts directly to Flex Craft tubing to create a robust point of use conveyor.



Micro Wheel Conveyor

Description	Part #
Micro Wheel Conveyor	MWC
Flush Mount Adapter	MWCF
Stop Mount Adapter	MWCWS

Micro Wheel Conveyors use gravity to allow product to roll into position. Conveyors are available in 10" lengths and can be cut to length.

Flush and Stop Mount Mounting Adapters easily capture / conceal the ends of the conveyor and allow for mounting to the tube.

CONVEYORS

Ball Transfers & Skate Wheels



Ball Transfers

Description	Load Rating	Part #
Orbital Movement	75 lbs.	BALL TRANSFER
Can be bolted to all faces of tube.		

Skate Wheels

Description	Load Rating	Part #
Skate Wheel	60 lbs.	SKATE60
Skate Wheels are bolted directly to tubing. Suggested using a 2 1/4" long bolt with nylon lock nut to attach.		

ACCESSORIES

Brackets & Hooks



L Bracket

Use this L Bracket as:

- Lane divider
- Shelf extension
- Bin holder
- Louver strip
- Stop Rail

Louver Strip	
Description	Part #
12" Metal L Bracket	LB12

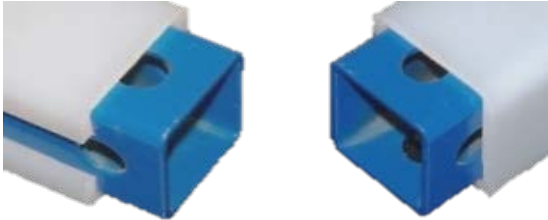
Heavy Hook Series

There are many applications for the heavy hooks.



Hooks	
Description	Part #
Bolted Peg Hook 6"	BPH6
Bolted Peg Hook 9"	BPH9
Bolted Peg Hook 12"	BPH12
Bolted Horizontal Hook 3" Gap	BH3
Bolted Vertical Hook 3" Gap	BV3

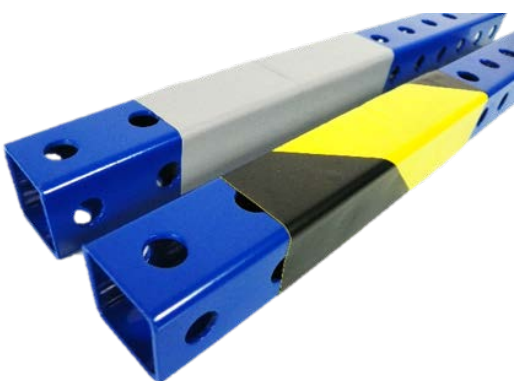
ACCESSORIES



Snap On		
Description	Part #	
UHMW Snap On Plastic Rail 60" in length	SNAP	
Snap On uses surface tension to allow products to slide into position. Cuts easily and can be mounted by snapping over Tubing. Great for protecting painted parts.		

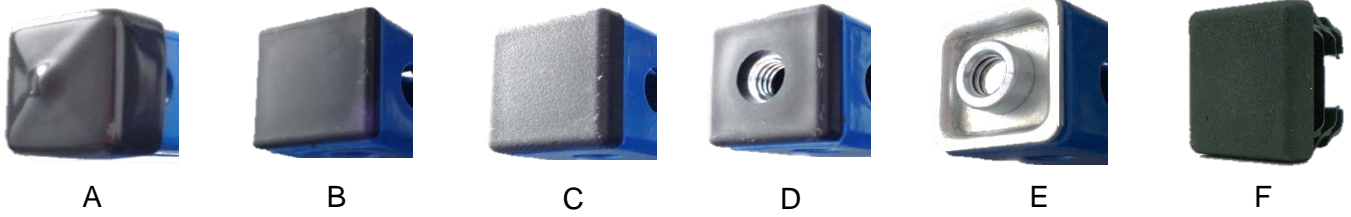


Velcro Strips		
Description 1"x 75'	Part #	
Black Industrial Strength Hook and Loop Velcro	BHLV	
Black Industrial Strength Hook	BHV	
Black Industrial Strength Loop	BLV	
White Industrial Strength Hook and Loop Velcro	WHLV	
White Industrial Strength Hook	WHV	
White Industrial Strength Loop	WLV	



Tube Wrap		
Description	Part #	
Color	2"	4"
Black	TBK2	TBK4
Blue	TBL2	TBL4
Gray	TGY2	TGY4
Caution Yellow	TCA2	TCA4

ACCESSORIES



Inserts, Caps, and Plugs		
Letter	Description	Part #
A	Dip Molded End Cap – Vinyl Cap covers exterior of tube	CAP
B	Insert Glide – Poly Glide inserts into tube, excellent for finished flooring	INSGLI
C	End plug – Plug conceals Tube Ends and provides a clean finish look	ENDPLUG
D	Threaded Plastic Insert - Insert is used for Stem Casters, Nylon Glide Stems and other tubes	PINSERT
E	Threaded Metal Insert – Insert is used for Stem Casters, Nylon Glide Stems and other tubes	INSERT
F	Notched End Plug - Plastic Insert with notches conceals tube ends. Notched to fit around the bolt	N-Plug

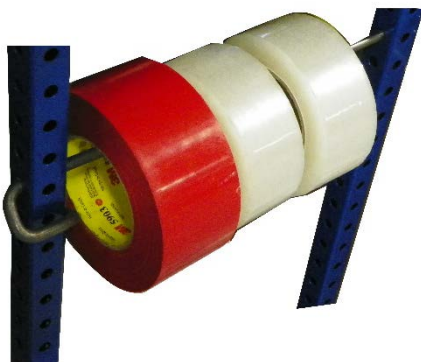


Stubs	
Description	Part #
Stub Tube	STUB
The Stub Tube can be used as a shelf support and bracing. Available in 2" and 3" lengths. Available in black only.	

Union	
Description	Part #
Tube Union	1604
The Tube Union can be used as a tube extension or as a point of use louver. The Union slides into and bolts two tubes together to create a non-load bearing extension. Available in black only.	

ACCESSORIES

Plug and Play



Tool Less Pin

Description	Part #
Tool Less Pin	TLCONNECTOR

The Tool Less Pin quickly joins two tubes together for quick and easy adjustments. See above.

Tool Holder

Description	Part #
2" Square Tool Holder	2THS
3" Square Tool Holder	3THS
4" Square Tool Holder	4THS

Tool Holders are easily pushed into tube holes for a secure hold.

Spool Holder

Description	Part #
12" Spool Holder	12SH
18" Spool Holder	18SH
24" Spool Holder	24SH

The Spool Holder is a longer version of the Tool Less Pin. The Spool Holder quickly mounts between two tubes.

ACCESSORIES

Plug and Play



A



D



B



C

Plug and Play Accessories

Letter	Description	Part #
A	4"D x 12"W x 24"L Basket	BASKET
B	12" x 24" Flat Shelf	FLAT SHELF
C	12" x 24" Flow Shelf	FLOW SHELF
D	Document Holder – adjust width to fit (portrait, landscape or other)	DOC HOLDER

Plug and Play features are used as Point of Use applications. With peg hook style attachment, items will attach to horizontal or vertical tubing.

ACCESSORIES

Handles, Hinges, & Slides



Drawer Slide

Description	Part #
12" Drawer Slides	Drawer Slide 12"
18" Drawer Slides	Drawer Slide 18"
24" Drawer Slides	Drawer Slide 24"

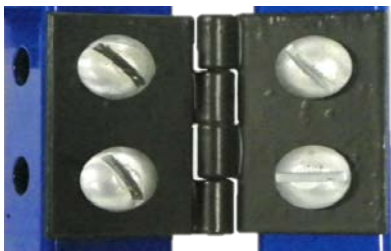
Bolt the Drawer Slides to tubing, and add inside framing. Installation hardware included. Rated at 100 lbs. per set. Other fabrication required.



Machine Handle

Description	Part #
9" Long Machine Handle	Handle

Bolts directly to tube. Best used for machine, door, and push handle applications. Width can be reduced.



Hinge

Description	Part #
2" x 2" Hinge	Hinge

Attaches to two parallel tubes to create a door or gate.



Indexing Handle

Description	Part #
Indexing Handle	Indexing Handle

In combination with the Hinge, you can create a door. Press Red Button to disengage and swing handle out of the way.

ACCESSORIES

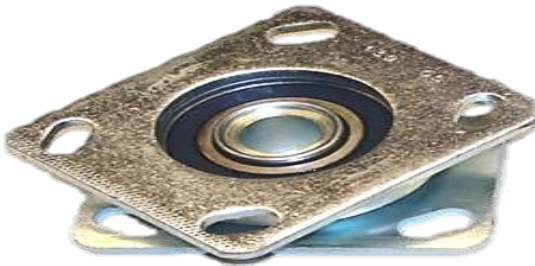
Towable



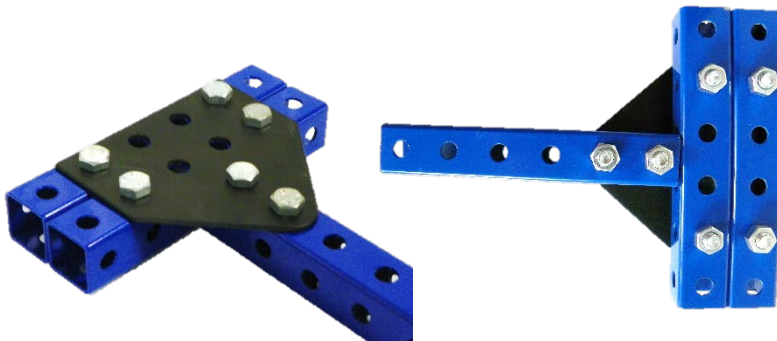
Hitch	
Description	Part #
Hitch Assembly Kit	Hitch
Hitch Kits bolt to tubing and are joined with a Hitch Pin. Hardware included.	



Female Heavy Hitch	
Description	Part #
Female Heavy Hitch	HHitch
Female Heavy Hitches are recommended for heavy duty towing applications. Hitch hole is 1" diameter.	



Turn Table		
Description	Load Rating	Part #
3" x 3" Turn Table	1200 lbs.	TTable3
Turn Tables bolt to the frame like a plate caster. Use to create a quad steer cart or make a lazy susan.		



Adapter	
Description	Part #
2" Center Adapter	2CA
4" Center Adapter	4CA
Horizontal or Vertical Brace	

ACCESSORIES

Specialty Items



Ergo Leg Lift Kits

Description	Part#
6" Ergo Leg Lift Manual Kit	6ELLM
12" Ergo Leg Lift Manual Kit	12ELLM
6" Ergo Leg Lift Electric Kit	6ELLE
12" Ergo Leg Lift Electric Kit	12ELLE

Ergo Leg Lift kits bolt to tube frame. Set of 4 legs load rated for 1,000 lbs.



Label Holder

Description	Part #
48" long Label Holder	LHOLDER

Label Holder can be cut with scissors and bolted to tube. Holder is at a 30 degree angle and ideal for lower shelf viewing.



Netting / Guarding

Description	Part #
Netting / Guarding	GUARD

Poly Netting can be bolted to tubing.



Dip Molded Bolt Cap

Description	Part #
Dip Molded Bolt Cap	BOLTCAP

Bolt Caps are made of soft vinyl and cover exposed threads.

ACCESSORIES



A



B



C



D



E



F



G



H



I

Specialty Items		
Letter	Description	Part#
A	Flex Craft cup holder	FCCH
B	EZ-Shelf Bracket	EZSB
C	Economic Ergo Lift Bracket	EELB
D	Universal Flow Bracket	UFB

Specialty Items		
Letter	Description	Part#
E	Tube Saddle	Tube Saddle
F	Xmas Tree Clip	XTREE
G	Zip Tie Mount	ZIPTIE
H	Screw Lag	SCREWLAG
I	1/8" x1" 50' Neoprene Foam	Neoprene Foam Strip

ACCESSORIES

Specialty Items



Cleaning Stations

Special Order Items	
Part Description	
Work Surfaces	
PE	Poly Ethylene
HDPE	High Density Poly Ethylene
Wood	Plywood, MDF, Pegboard, Masonite, and more
Steel	HR, CR, Galv., Powder Coated, and more
Storage / Shelving	
Louver Panels	Various sizes and colors available
Conveyors	
Nylon Micro Wheel	Applied to tubing as a point of use conveyor
100 lb. Skate Wheel	Rated for 100 lb. per wheel
Accessories	
Telescoping Leg	1 1/4" Telescoping Tube – Galv. Only
Andon	Use multiple color tubes to create Andon
Monitor Mount	Mount your monitor or TV to the tubing

Flex Craft offers a variety of non-stocked but available items. If you don't see what you're looking for, please contact us with your questions, comments, or suggestions.



Nylon Micro Wheel



Monitor Mount



Actual Desk At Flex Craft

Looking for a starting point?

Try any one of our kits! Check on-line for options.



Build your solutions

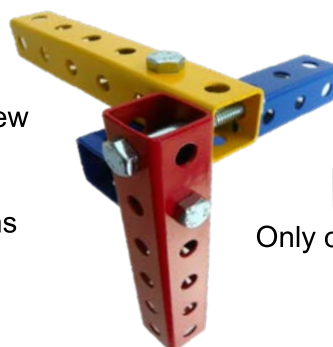
Fast

With Pre-cut sizes

Recycle old projects into new

Flexible

Material Handling Solutions



User

Friendly

Only one tool to assemble



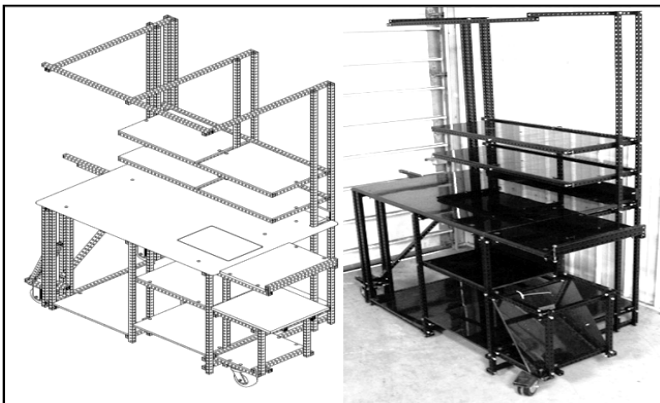
The Show Kit will build any one of these and more!

Limited substitutions available

Assembly Services

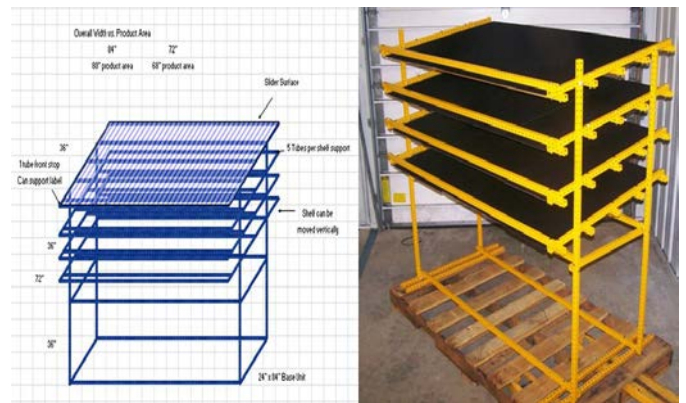
Flex Craft offers a complete assembly service. Let our team help design and assemble your project/solution.

Send us your sketch or design it in Flex Builder, and let's get started.



Design

Finished Product

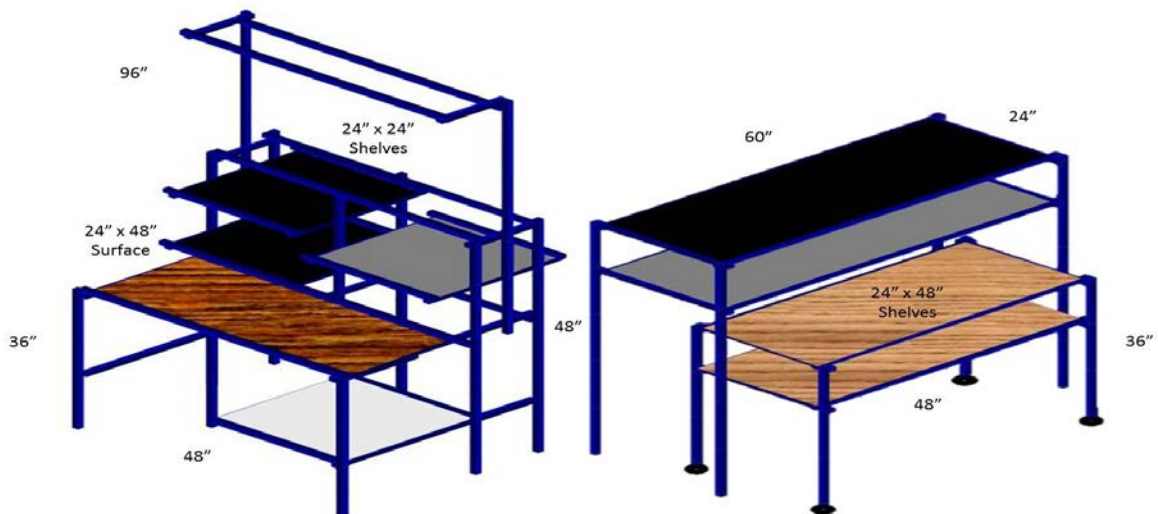


Design

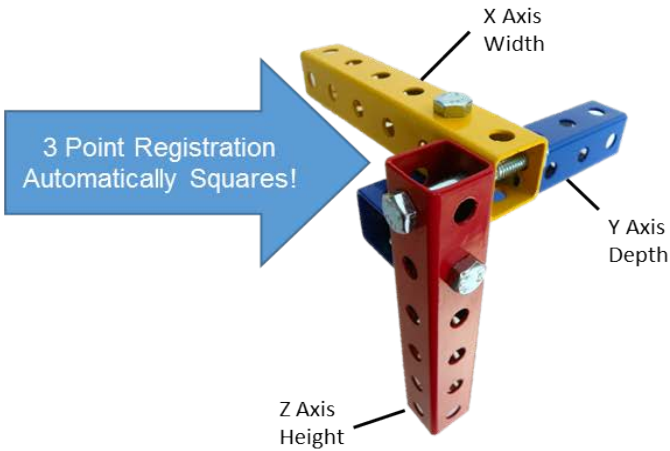
Finished Product

Design Software/Tool

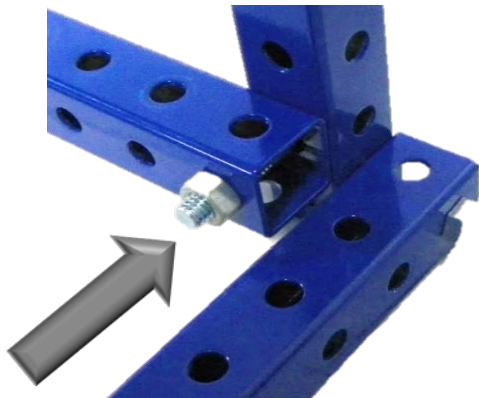
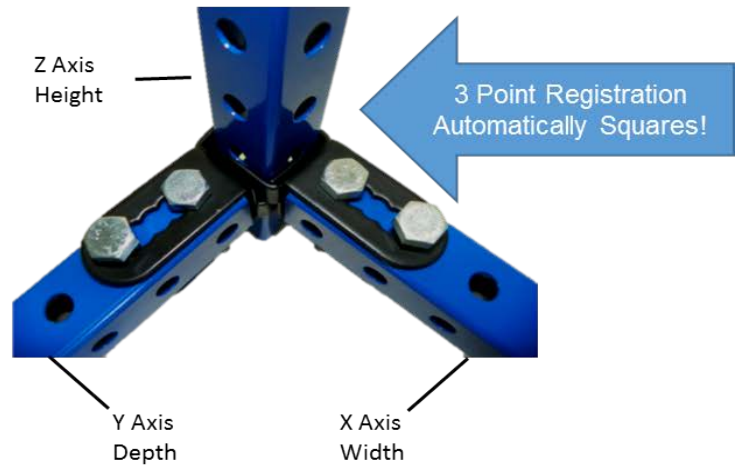
Flex Craft offers free design software – Flex Builder. The copy / paste Microsoft Excel Program is quick and easy to operate. Limited SolidWorks files are also available upon request.



Direct Bolt Joint



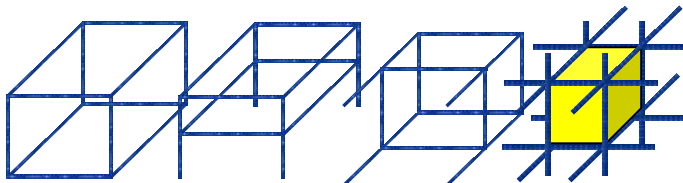
Universal Joint



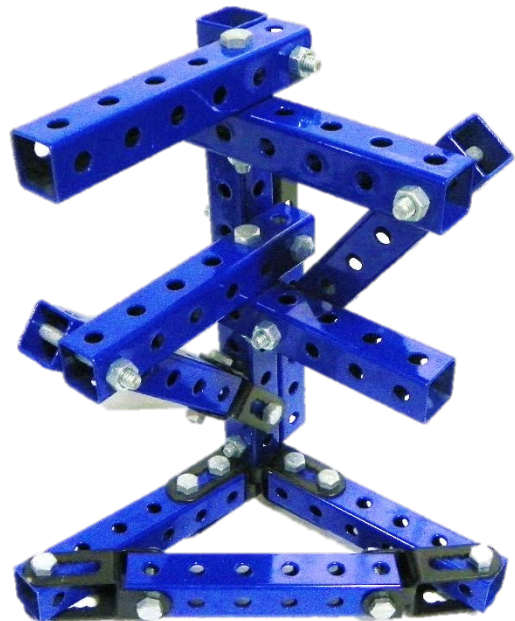
Non-Load Bearing

Framing Tips - Cubing

For best possible results, follow guide below



Bracing Options



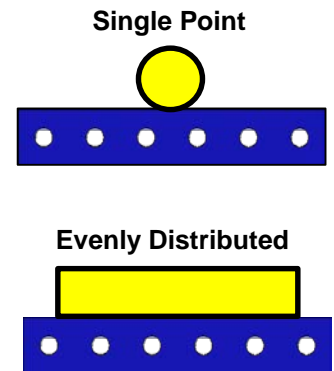
Surface Tips – Hidden Bolts

By drilling an existing hole (one side only) out to 1/2", a socket head cap screw can be placed inside the tube and attached.

LOAD REFERENCE

Load Reference Chart

Tube Length	Powder Coat Steel Tube		Anodized Aluminum Tube	
	Single Point	Evenly Distributed	Single Point	Evenly Distributed
12"	485 lbs.	970 lbs.	270 lbs.	540 lbs.
24"	240 lbs.	480 lbs.	133 lbs.	266 lbs.
36"	152 lbs.	304 lbs.	85 lbs.	170 lbs.
48"	121 lbs.	242 lbs.	67 lbs.	134 lbs.
60"	97 lbs.	194 lbs.	54 lbs.	108 lbs.
72"	74 lbs.	148 lbs.	44 lbs.	88 lbs.
84"	69 lbs.	138 lbs.	38 lbs.	76 lbs.
96"	61 lbs.	122 lbs.	34 lbs.	68 lbs.
108"	52 lbs.	104 lbs.	29 lbs.	58 lbs.
120"	38 lbs.	76 lbs.	21 lbs.	42 lbs.



Key Points to Calculate Load Capacity

In the example provided:

- A Single Point Load placed on 2 – 36" steel tubes would start to yield/deflect around 304 lbs(2 tubes x 152 lbs.).
- An Evenly Distributed Load placed on 2 – 36" tubes would start to yield/deflect around 608 lbs (2 tubes x 304 lbs.).

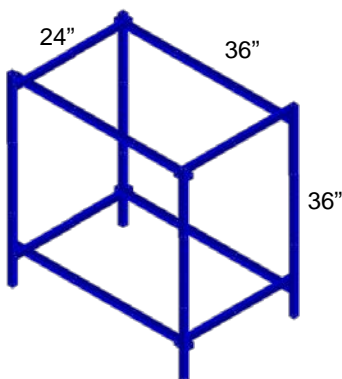
Effective Countermeasures:

- Add either (or both) additional vertical or horizontal tube supports – see support examples.
- This redistributes the load weight from 2 tubes to 4 tubes.
- Doubling Tubes – bolting 2 tubes together either horizontally or vertically redistributes the load weight from 2 tubes to 4 tubes.

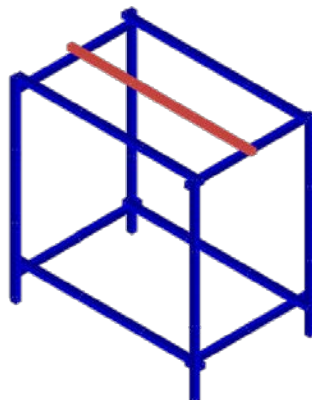
Caster Capacity Key Points:

- If the weight is evenly distributed, the load rating of each caster is used. For example, if the expandable stem casters (as shown at right) are rated for 250 lbs. each, then the total distributed load rating is 1,000 lbs. (4 casters x 250 lbs.)

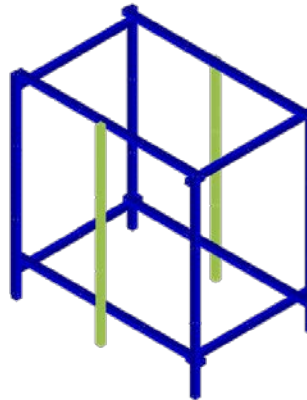
Example Dimensions



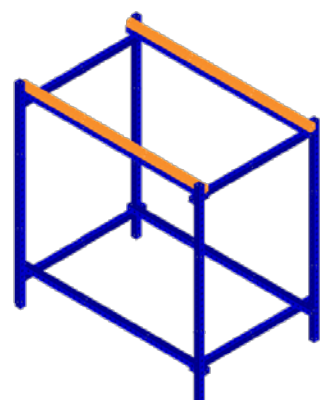
Horizontal Tube Support Example



Vertical Tube Support Example



Double Tube Support Example



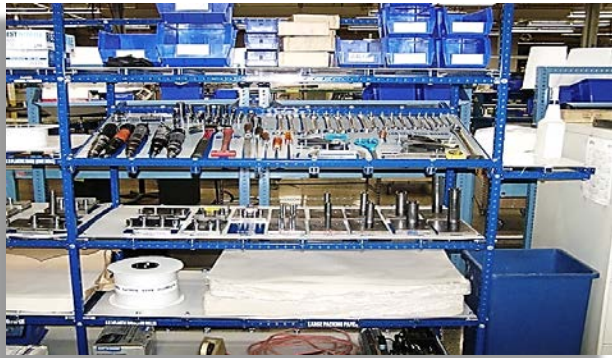
BEST PRACTICES

Plant



BEST PRACTICES

Work Stations



BEST PRACTICES

Carts



BEST PRACTICES

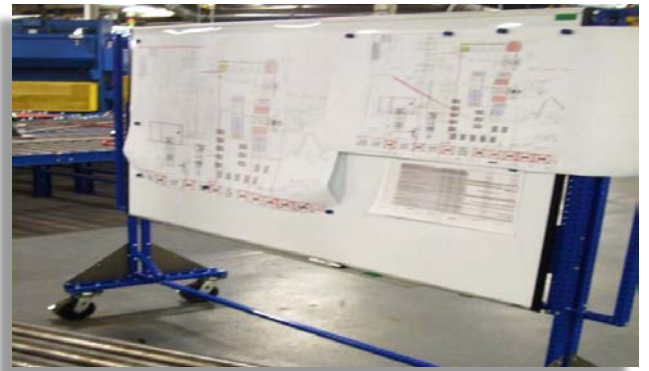
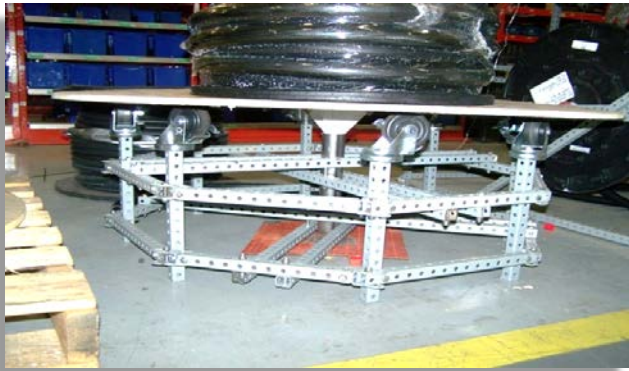
RE21 BK4C1CE2

Flow Racks and Shelving



BEST PRACTICES

Other





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