

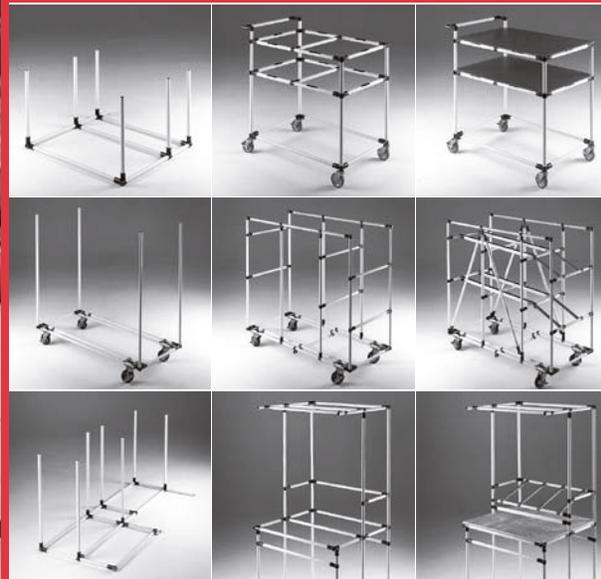


**AN INTRODUCTION
TO HELP YOU
BUILD AN EFFICIENT
MATERIAL HANDLING
SYSTEM...**

**SINGLE STRUCTURE,
PLANT-WIDE,
NATION-WIDE OR
WORLD-WIDE.**

800.839.8823

WWW.CREFORM.COM



**WE'RE A WHOLE LOT MORE THAN PIPE & JOINTS...
WE CAN BE YOUR LEAN MANUFACTURING PARTNER, TOO.**

CREFORM[®]
MATERIAL HANDLING SYSTEM
*IT'S HOW YOU PUT IT TOGETHER
THAT SETS US APART.*

CREFORM

THE ADAPTIVE MATERIAL HANDLING SYSTEM TO
CONTINUOUSLY IMPROVE YOUR MANUFACTURING PROCESS



It's how you put it together that sets us apart.

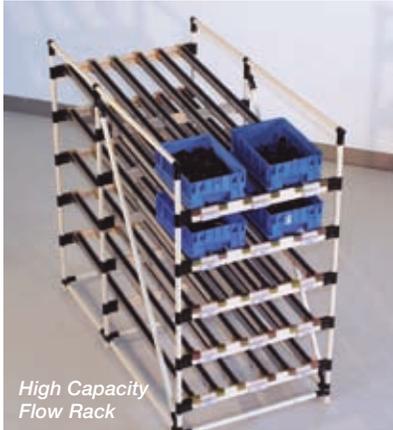
Creform is the original adaptive material handling system for companies looking to support continuous improvement and lean manufacturing programs. Our broad line of plastic coated steel pipes, fittings and accessories is designed to let you custom build workstations, flow racks, carts, AGVs and other material handling structures that can easily be changed again and again to match your manufacturing needs.

You'll find over 700 pipes, joints and components in the Creform catalog that will allow you to build just about any structure imaginable. Our plastic coated steel pipes come in a wide variety of colors, sizes and shapes including 42mm diameter pipe where additional strength is required. Metal joints provide flexibility while plastic joints offer economy for permanent structures. And a wide selection of Creform accessories gives you the ability to customize your structure to meet your needs.

It's also how we work together that sets us apart.

Creform is a resource beyond the sale of pipes, joints and components helping you develop solutions to material handling problems and increasing worker productivity. Using the Creform System, Creform sales engineers work with your team members to help support continuous improvement and 5-S programs eliminating non-value added waste. We have thousands of structure drawings in our data base that can help quick-start your project. We don't just sell you a product, we're there to assist in helping make your operation lean and improve your plant's environment.

A CREFORM STRUCTURE IS ONLY LIMITED BY YOUR IMAGINATION. FOR EXAMPLE...



High Capacity Flow Rack

This high-capacity, height and angle adjustable flow rack offers high strength construction to hold up to 350 lb. per level.



U or L-shaped Workstations

U or L-shaped s allow operators to easily move from station to station with minimal steps.



Dunnage Cart

A Creform sequencing cart is easy to build to match dunnage requirements and protect parts or sub assemblies when sequencing to the line.



BST Uni-directional Tugger

The Creform BST AGV system allows users to move multiple carts of similar designs, or a variety of carts provided the undercarriages feature the BST interface.



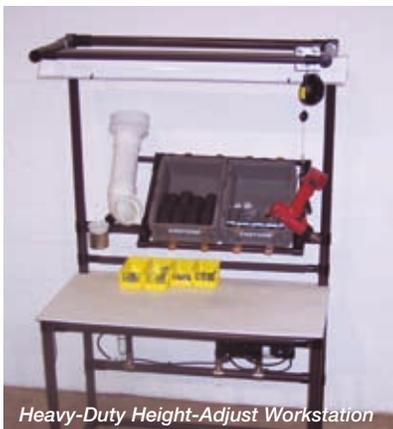
Display Board Frame

Creform systems don't have to involve high technology logistics for material handling. Even a simple movable display board contributes to plant efficiency.



Kitting Cart

A kitting cart aids in accurately filling logistic orders and can easily be modified for a variety of assembly operations.



Heavy-Duty Height-Adjust Workstation

This heavy-duty workstation with 1000 lb. load capacity uses Creform high strength $\phi 42\text{mm}$ pipe and complementary joints and accessories.



ESD Flow Rack

Mobile flow racks for standard or anti-static (ESD) applications allow operators to make their assembly areas more ergonomically friendly and flexible, while minimizing floor space.



Push Cart

Creform push carts are lightweight yet strong, offer exceptional maneuverability, and can be built to exact size requirements then easily modified when needs change.

SIMPLE TO DESIGN, BUILD AND MODIFY.

Getting Started

The pages that follow are designed to provide you with guidelines for building three useful structures, while familiarizing you with the Creform System. All three structures can be built using the Creform Starter Kit of materials.

Step-by-step instructions, and a bill of materials needed to complete the project are included. Each of these structures can be

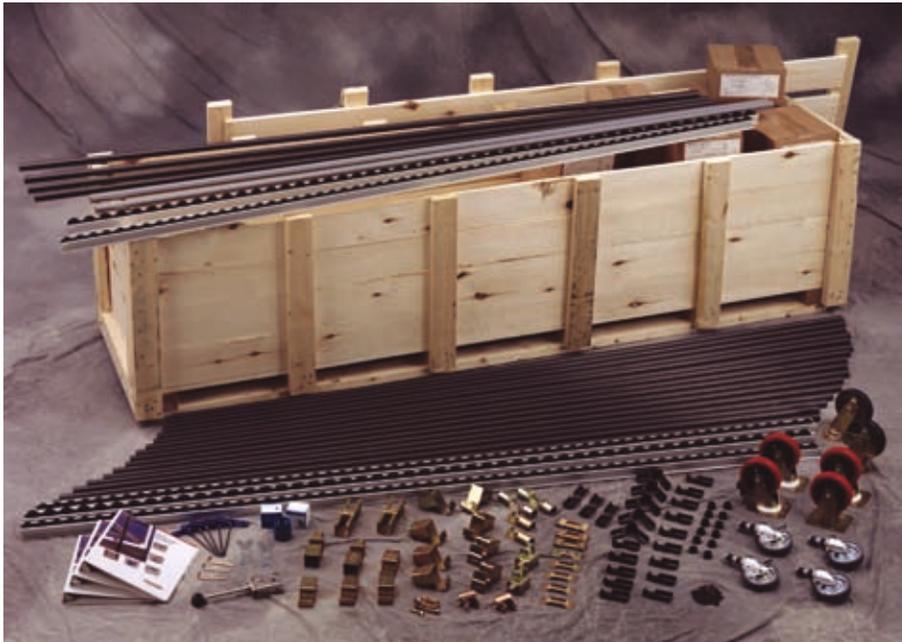
built as shown, or they can be modified to meet your specific requirements. However, should you modify any of these designs we recommend that you follow the technical specifications found in Section H of the Creform catalog to ensure the structural integrity of your finished product.

Once you become familiar with the Creform System, we're confident

that you will identify many applications and solutions to meet your material handling challenges. With a small amount of inventoried material you will be able to respond quickly with creative solutions that will help move your company further down the path of continuous improvement.

Creform engineers are available to assist you at any time.

Creform Starter Kit



The Starter Kit is a simple and economical method to acquaint new users with the Creform Material Handling System. It contains a variety of components in sufficient quantities to assemble introductory structures such as carts, racks, conveyors and workstations. The Starter Kit can be individualized with components specific to a particular application and budget.

Starter Kit contents may include (but are not limited to) a range of pipe styles including round and with flat "slide" surfaces, metal joints, conveyor rollers and components, casters, and tools such as a pipe cutter, deburring tool and wrenches. Creform recommends the initial use of metal joints which provide reusability and flexibility. However, plastic joints may be specified.

Creform Tools



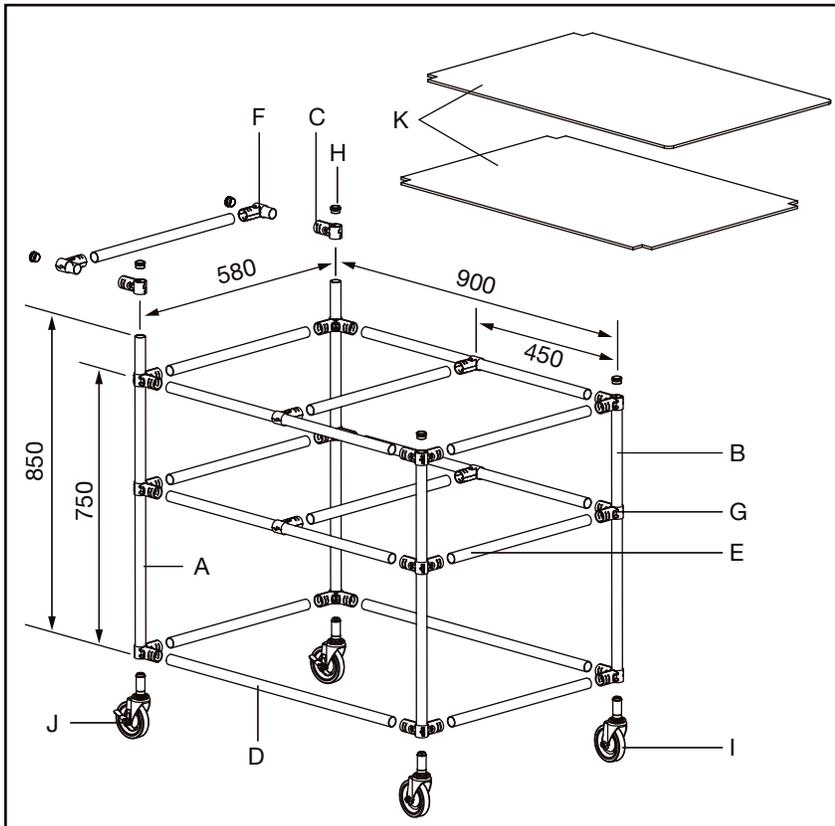
Only a few basic tools are required to create Creform structures. Most people are comfortable with the familiar grouping of tools at far left and these are sufficient to assemble most structures. Experienced users and those assembling on a large scale may want to make use of additional tools and powered equipment.

The shadowboard tool cart shown at left helps support your Five S program with dedicated storage locations. Shown with Creform tools, such a cart can be customized for your tools, parts, and supplies.

PUSH CARTS

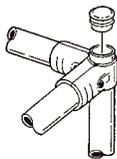
To modify this design consult the Technical Section H of the Creform Catalog or your Creform sales engineer.

All dimensions in metric units. For example H-884 is 884mm in length.



Height w/Caster 880.

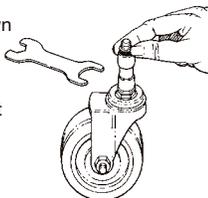
De-Burr pipe before placing end cap into pipe



Place nut on inside of fitting and bolt on outside for easier tightening and accessibility

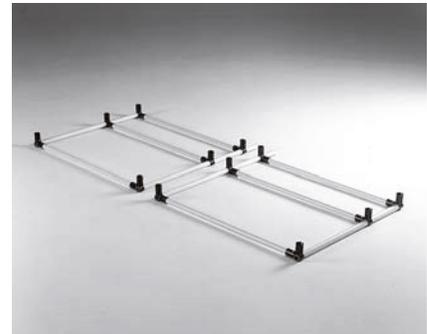


1. De-Burr pipe
2. Hand tighten down nut until rubber bushing fits snug into pipe end
3. Insert caster shaft into pipe
4. Tighten nut with caster wrench until secure



Bill of Material

	Name	Quantity
A	Pipes (Height) H-884	2
B	H-784	2
C	Pipes (Length) H-64	2
D	H-830	6
E	Pipes (Width) H-510	9
F	Components HJ-1	8
G	HJ-2	12
H	J-110	6
I	YGR-100	2
J	YGR-100S	2
K	Surface 935 x 615	2
L	Velcro 1" x 4"	12 Set



Assemble two sides on flat surface with metal joints pointing up. Finger tighten bolts and nuts.



Insert horizontal support pipes in one side first. Tighten bolts and nuts. Attach second side.



Assemble all remaining cross members, handle, and insert casters. Place two-piece velcro on pipes.

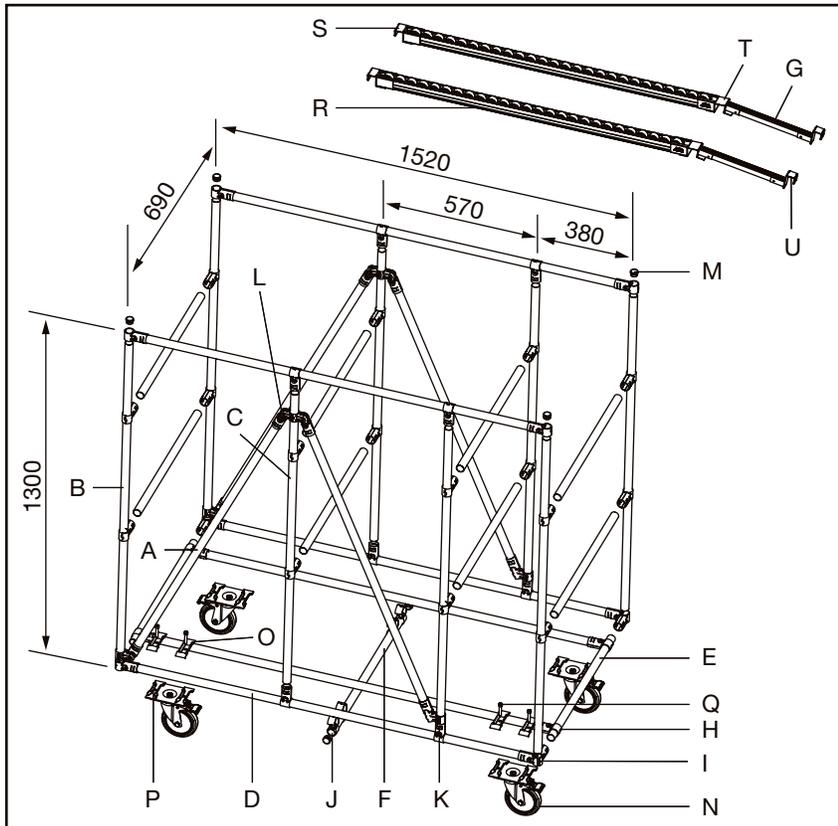


Remove protective tape from velcro and carefully place boards in position.

FLOW RACKS

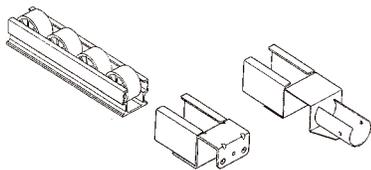
To modify this design consult the Technical Section H of the Creform Catalog or your Creform sales engineer.

All dimensions in metric units. For example H-1215 is 1215mm in length.

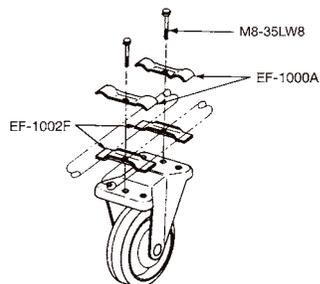


Height w/Caster 1465.

Insert plastic wheel conveyor into EF-2044C, H



Note: Attach caster straps to caster plate prior to attaching pipes.



Bill of Material

Name	Quantity
A Pipes (Bracing) H-1215	4
B Pipes (Height) H-1334	4
C H-1230	4
D Pipes (Length) H-1450	6
E Pipes (Width) H-620	10
F H-730	1
G HK-370	4
H Components HJ-1	32
I HJ-2	4
J HJ-6	4
K HJ-7	4
L HJ-12	2
M J-110	10
N YJ-130S or TJ-130SU	4
O EF-1000A	8
P EF-1002F	8
Q M8-35LW8	8
R EF-2044-1107	4
S EF-2044C	4
T EF-2044H	4
U EF-2061E	4



Assemble base of rack on flat surface with four main uprights. Tighten bolts and nuts.



Attach casters and tighten all bolts and nuts.



Assemble remaining support pipes. Tighten all bolts and nuts.

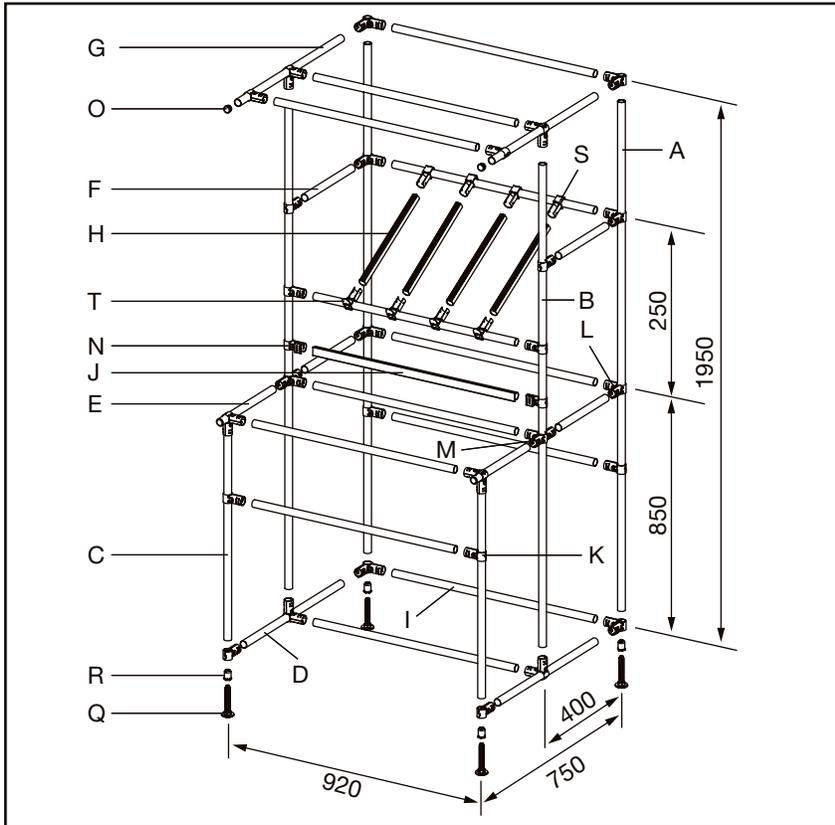


Attach conveyor assemblies and adjust the height of conveyors to complete the flow rack.

WORKSTATIONS

To modify this design consult the Technical Section H of the Creform Catalog or your Creform sales engineer.

All dimensions in metric units. For example H-1984 is 1984mm in length.



Height w/Adjuster Foot 2050. Work Surface Hgt. w/Adjuster Foot 948.



Assemble two sides on flat surface. Finger tighten bolts and nuts.



Insert horizontal support pipes and tighten all bolts and nuts. Attach second side.



Attach all remaining pipes, joints and tighten bolts and nuts. Insert and tighten height adjuster feet.



Attach work surface and slide pipes. An overhead work light can be added if desired.

Insert slide pipe into EF-2061A, B

Attach pipe to board using EMT-1

1. De-Burr pipe
2. Place EF-1209CA into pipe
3. Screw EF-1209A into EF-1209CA
4. Adjust height and tighten nut until secure

Bill of Material		
	Name	Quantity
A	Pipes (Height) H-1984	2
B	H-1880	2
C	H-832	2
D	Pipes (Length) H-680	2
E	H-370	2
F	H-330	4
G	H-720	2
H	Slide Pipe HK-425	4
I	Pipes (Width) H-850	12
J	HF-850	1
K	Components HJ-1	12
L	HJ-2	14
M	HJ-3	2
N	MF1-1	2
O	J-110	6
P	EMT-1	4
Q	EF-1209A	4
R	EF-1209CA	4
S	EF-2061A	4
T	EF-2061B	4
U	3/4" Surface 955 x 820	1
V	Screw	4

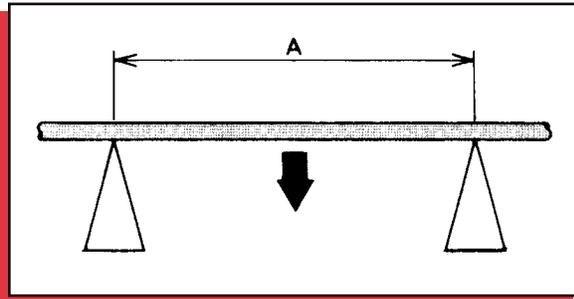
THE CREFORM SYSTEM

Creform Standard 28mm Pipe Strength

Experimental Conditions

- The pipe rests freely at room temperature on two supports.
- A force is applied at 1/2 A at a speed of 50mm/min.

A Dimension	Proportional Limit
450mm (1' 5")	140kg (308 lbs.)
900mm (2' 11")	70kg (154 lbs.)
1,000mm (3' 3")	58kg (128 lbs.)
1,100mm (3' 7")	52kg (115 lbs.)
1,300mm (4' 3")	46kg (101 lbs.)
1,500mm (4' 11")	38kg (84 lbs.)
1,800mm (5' 10")	32kg (70 lbs.)



* Proportional limit refers to the point where any further force would permanently deform the pipe.

For further technical information contact your Creform Representative.

CREFORM CATALOG



Creform customers receive our complete catalog, listing over 700 components including pipes, joints, accessories, casters and specialty items plus a detailed technical section and many examples of structures and applications. Special products such as Creform AGVs, pick-to-light systems and stainless steel products are also included. The catalog is laid out in product groups making it extremely easy to locate the right parts for your projects. There are photographs and dimensional drawings of every component along with material descriptions and usage data. Contact a Creform representative for details.

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