



# Material



Raw materials. Manufacturing supplies. Finished products. Unless it's all moving, production isn't really happening. IAC complements workstations with the material handling equipment needed to allow product to move and true production to take place.

Mobile Accessory Stations, Stationary Accessory Stations, and D4 Rolling Carts continue Dimension 4 construction and style. MTS rolling carts are heavy gauge mobile platforms for shelving, parts cup holders

and other accessories. Mobile cabinets are lockable for storing valuable tools, instruments or personal belongings – roll them to wherever the action is.

Gravity Feed Racks\* (not shown) and Conveyor Systems are stationary, but they keep essential parts, products and the like moving and within reach of production workers.

\*Gravity Feed Racks are special order only.

# Material handling

# Handling



Many Rolling Storage units and carts are manufactured with Dimension 4 components, and integrate beautifully in Dimension 4 workstation environments.

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Mobile carts, such as MTS Rolling Storage Carts pictured here, feature ergonomic maneuvering handles designed for comfort and stress-free use.



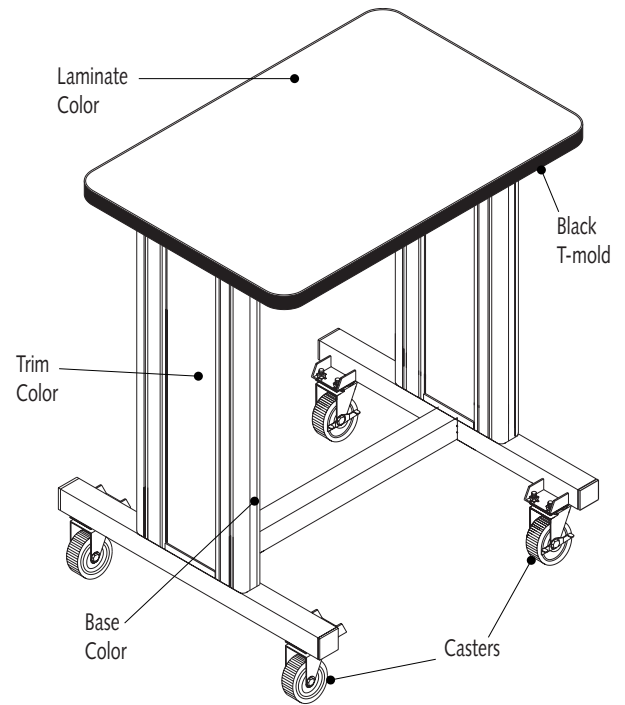
IAC designs efficient production lines by integrating conveyor and ball transfer systems.

Material  
handling

## D4 Rolling Carts

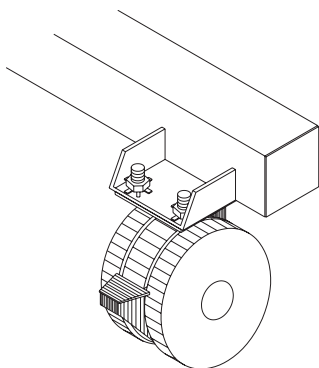


D4 Rolling Carts are constructed of D4 aluminum extrusion uprights, a welded tubular frame, support beams, and a 1-1/4" laminated worksurface with "T" mold edges and radiused corners. Carts are available in Standard and ESD laminates. ESD carts include a ground cord and drag chain. Shelves order separately. The height includes four standard 3" swivel plate casters, two locking and two non-locking. The overall weight capacity is 250 lbs. Optional shelves are adjustable along the uprights.



D4 Rolling Cart with two optional shelves

Width	Length	Standard Cart Height				Standard Lower Shelf	ESD Cart Height				ESD Lower Shelf
		30"	32"	34"	36"		30"	32"	34"	36"	
24"	30"	2050201	2050202	2050203	2050204	2050261	2050301	2050302	2050303	2050304	2050361
	36"	2050211	2050212	2050213	2050214	2050262	2050311	2050312	2050313	2050314	2050362
30"	30"	2050221	2050222	2050223	2050224	2050263	2050321	2050322	2050323	2050324	2050363
	36"	2050231	2050232	2050233	2050234	2050264	2050331	2050332	2050333	2050334	2050364
36"	36"	2050241	2050242	2050243	2050244	2050265	2050341	2050342	2050343	2050344	2050365
	42"	2050251	2050252	2050253	2050254	2050266	2050351	2050352	2050353	2050354	2050366



### Caster Upgrade

Increases weight capacity to 350 lbs. These 4" plate dual wheel casters add 5/8" to the overall height of the cart. The 4" swivel casters come as a set, with two locking and two non-locking casters included.

#### Part Number

2012692

D4 Rolling Carts ship KD.

## MTS Rolling Carts



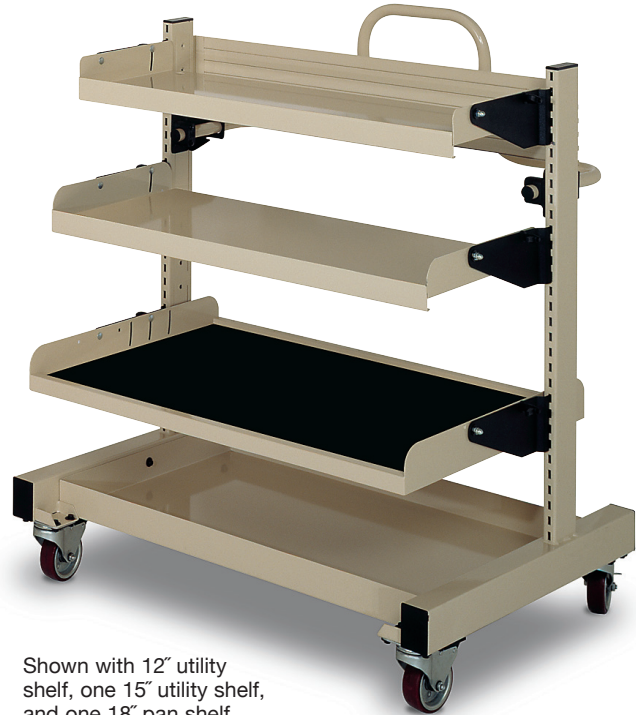
MTS Rolling Carts feature 4" plate casters, ergonomic handle and heavy duty frame with bottom tray and will provide a mobile yet sturdy cart for all your applications.

- Heavy gauge frame construction
- Single slot verticals
- Ergonomic handle
- 4" plate casters, total lock
- Bottom tray



Shown with one multi bin parts cup rail, one parts cup rail, one 12" utility shelf, one 15" utility shelf, and two 18" pan shelves.

Shelves and accessories sold separately



Shown with 12" utility shelf, one 15" utility shelf, and one 18" pan shelf.

Cart Length	Caster Type	Cart Height	
		42"	72"
30"	Hard Rubber	1050401	1050411
36"	Hard Rubber	1050402	1050412
30"	Polyurethane	1050421	1050431
36"	Polyurethane	1050422	1050432

### ordering tips from IAC...

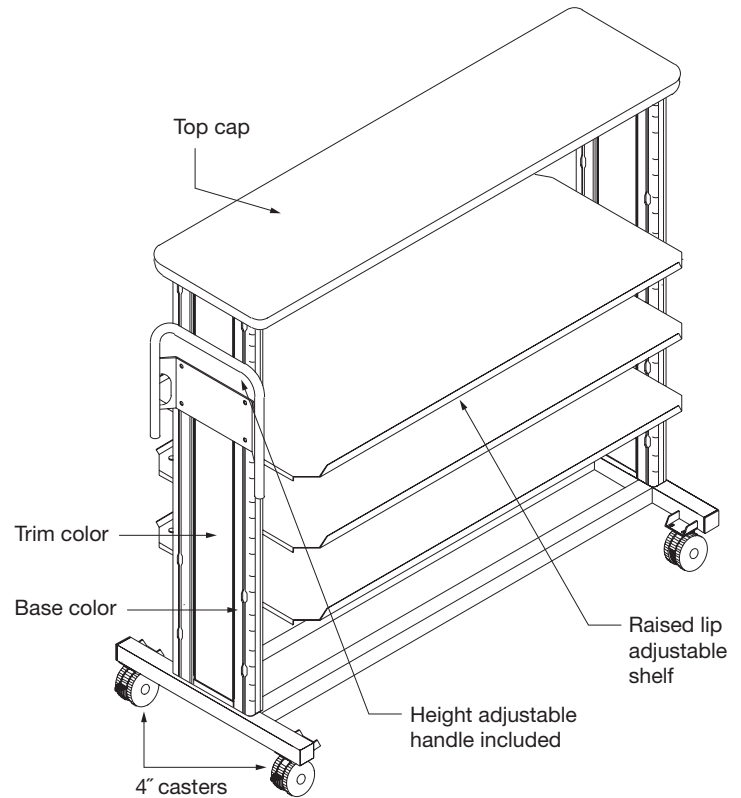
MTS Rolling Carts can be fitted with any of the regular MTS accessories; shelves, parts cup bin holders, etc. (not including swing arm accessories). See MTS System I options on pages H-3 through H-6. Use 60" bench length for 30" cart and 72" bench length for 36" cart.

## D4 Rolling Storage

### IAC D4 Rolling Storage and Equipment Carts

D4 Rolling Storage and Equipment Carts are constructed of D4 aluminum extrusion uprights, a welded tubular frame, top and bottom support beams, and a 1-1/4" thick laminated top cap with "T" mold edges and radiused corners. The casters are 4" dual wheel plate type, two locking, two non-locking, all swivel. Total weight capacity is 500 lbs evenly distributed on the shelves. The handle is ergonomically designed for safety.

- Three shelves included
- ESD models include grounding cord and drag chain
- Three heights, four lengths, and three depths
- Shelves adjust along cart uprights



Cart Length	Shelf Depth	Cart Height-Standard			Cart Height-ESD		
		53"	65"	77"	53"	65"	77"
30"	18"	2050501	2050531	2050561	2050601	2050631	2050661
	24"	2050511	2050541	2050571	2050611	2050641	2050671
	30"	2050521	2050551	2050581	2050621	2050651	2050681
36"	18"	2050502	2050532	2050562	2050602	2050632	2050662
	24"	2050512	2050542	2050572	2050612	2050642	2050672
	30"	2050522	2050552	2050582	2050622	2050652	2050682
42"	18"	2050503	2050533	2050563	2050603	2050633	2050663
	24"	2050513	2050543	2050573	2050613	2050643	2050673
	30"	2050523	2050553	2050583	2050623	2050653	2050683
48"	18"	2050504	2050534	2050564	2050604	2050634	2050664
	24"	2050514	2050544	2050574	2050614	2050644	2050674
	30"	2050524	2050554	2050584	2050624	2050654	2050684

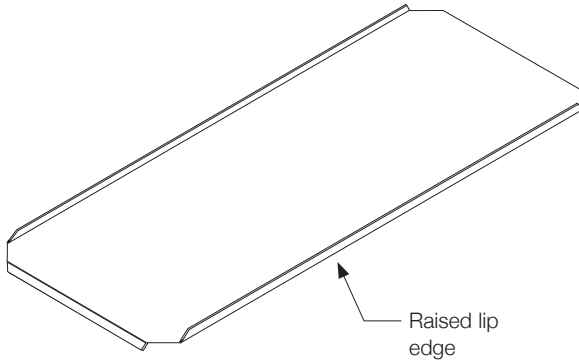
#### ordering tips from IAC...

1 Additional shelves may be ordered.

2 Please note that floor to top surface height includes standard caster.

## IAC D4 Rolling Storage and Equipment Cart Shelves

Standard cart includes three shelves. Additional shelves are available as options. These infinitely height-adjustable metal shelves have raised-lip edges.

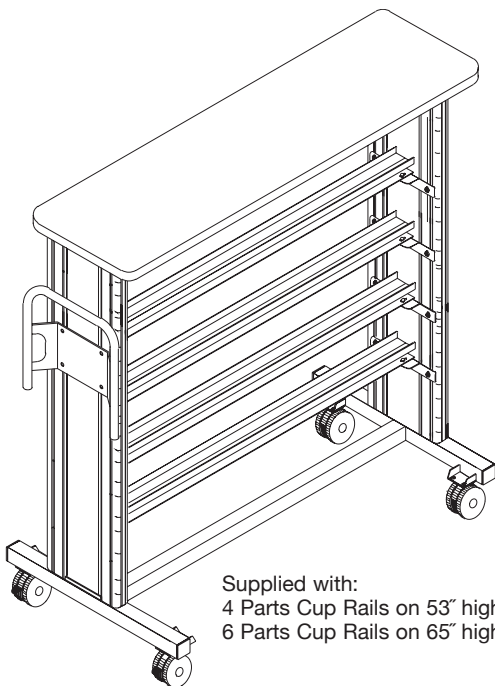


Shelf Length	Shelf Depth	Standard Painted Metal	ESD Laminate
30"	18"	2050701	2050731
	24"	2050711	2050741
	30"	2050721	2050751
36"	18"	2050702	2050732
	24"	2050712	2050742
	30"	2050722	2050752
42"	18"	2050703	2050733
	24"	2050713	2050743
	30"	2050723	2050753
48"	18"	2050704	2050734
	24"	2050714	2050744
	30"	2050724	2050754

### ordering tips from IAC...

When ordering ESD laminates be sure to specify color. See page A-16 for selection.

## D4 Rolling Parts Cup Cart



Supplied with:  
4 Parts Cup Rails on 53" high models;  
6 Parts Cup Rails on 65" high models

D4 Rolling Parts Cup Carts are available in two standard heights and two lengths. Adjustable double sided rails permit access from both sides of the cart.

### D4 Rolling Parts Cup Carts

Cart Length	Cart Height-STD		Cart Height-ESD	
	53"	65"	53"	65"
48"	2050801	2050811	2050821	2050831
60"	2050802	2050812	2050822	2050832

### Additional Parts Cup Rails

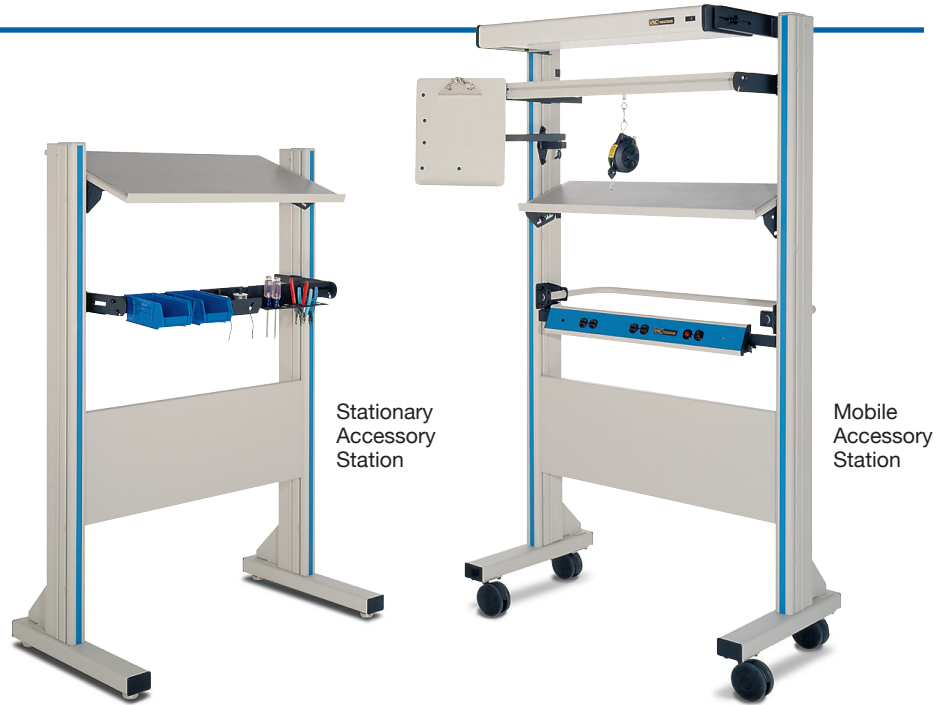
Cart Length	Standard Rails	ESD Rails
48"	2050841	2050851
60"	2050842	2050852



IAC Accessory Stations are designed to be placed adjacent to existing workbenches, conveyors, or wherever additional storage and work area is needed.

Accessory Stations are ideal for organizing manuals, tools, test equipment and parts, for multiple shifts.

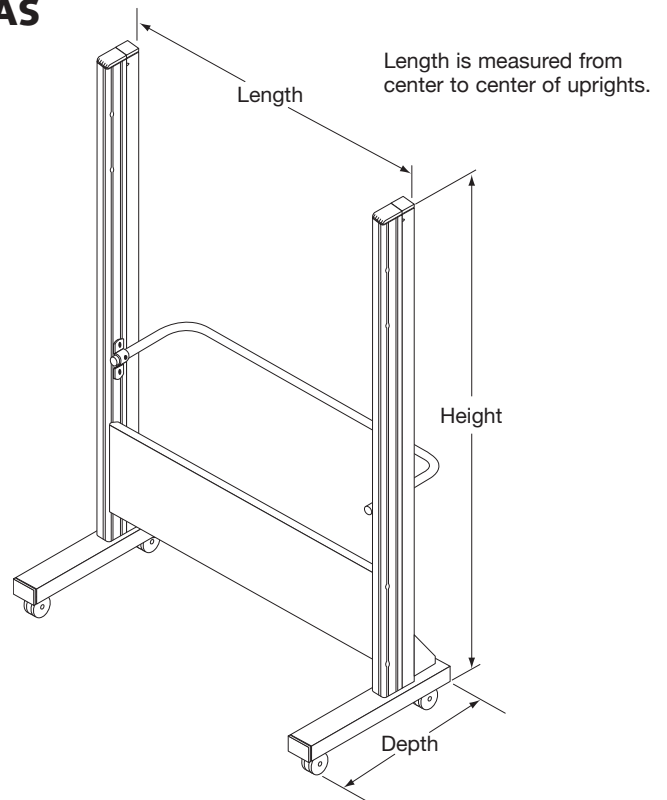
Accessories for 48" and longer stations are found in the Basic Dimension 4 Accessories pages. 36" long accessories are on following pages.



### D4 Mobile Accessory Station — MAS

The Mobile Accessory Station (MAS) is a freestanding structure configured with two Dimension 4 style uprights. The uprights include a grooved channel to mount and adjust accessories at any height. Standard features on the MAS include a modesty panel, a push handle, and 4" swivel casters, two of them locking. The MAS comes in four standard lengths, and three standard heights. Additional accessories and ESD options also available.

Length	Depth	Upright Height		
		65"	77"	89"
36"	24"	2003503	2003504	2003505
	30"	2003513	2003514	2003515
48"	24"	2003523	2003524	2003525
	30"	2003533	2003534	2003535
60"	24"	2003543	2003544	2003545
	30"	2003553	2003554	2003555
72"	24"	2003563	2003564	2003565
	30"	2003573	2003574	2003575

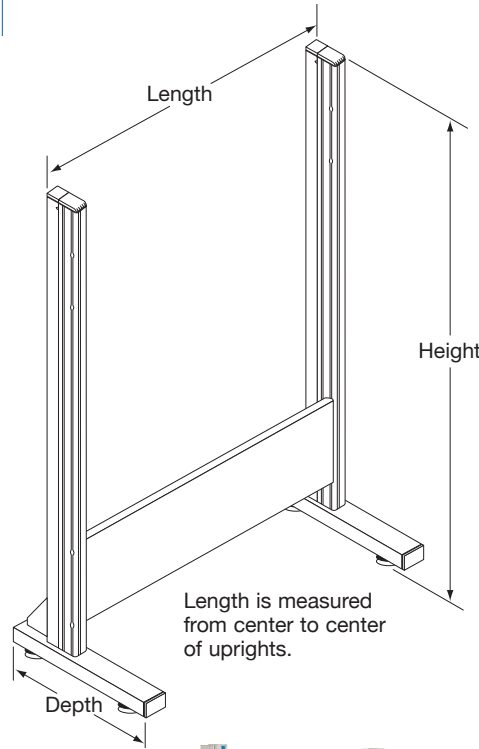


Casters make the MAS an ideal unit for moving and sharing among different production lines.

## IAC D4 Stationary Accessory Station — SAS

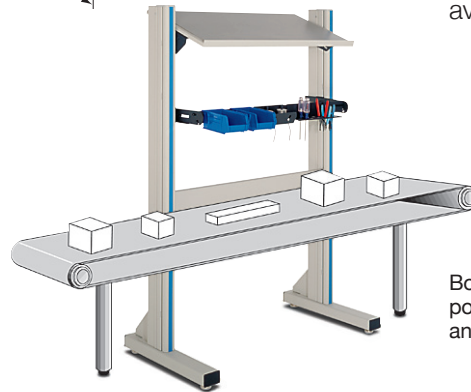
The Stationary Accessory Station (SAS) is similar to the MAS, but instead of casters, the SAS has floor glides.

The SAS is ideal for storage of tools, manuals, and parts. Like the MAS, the SAS can accommodate above-the-worksurface accessories such as shelves, lights, power strips, tool trolleys, parts cup stringer, and swing arm platforms.



Length	Depth	Upright Height		
		60"	72"	84"
36"	24"	2004103	2004104	2004105
	30"	2004113	2004114	2004115
48"	24"	2004123	2004124	2004125
	30"	2004133	2004134	2004135
60"	24"	2004143	2004144	2004145
	30"	2004153	2004154	2004155
72"	24"	2004163	2004164	2004165
	30"	2004173	2004174	2004175

The Stationary Accessory Station (SAS) is a freestanding structure configured with two Dimension 4 style uprights. The uprights include a grooved channel to mount and adjust accessory height. Standard features on the SAS include a modesty panel and floor glides. The SAS is available in four standard lengths, and three standard heights. Additional accessories and ESD options also available.



Both MAS and SAS are ideal for positioning a productive workstation anywhere along an existing conveyor.

### MAS/SAS Accessories

For 36" length models see the following pages for accessory options. For all other lengths refer to D4 accessory section beginning on page B-35.

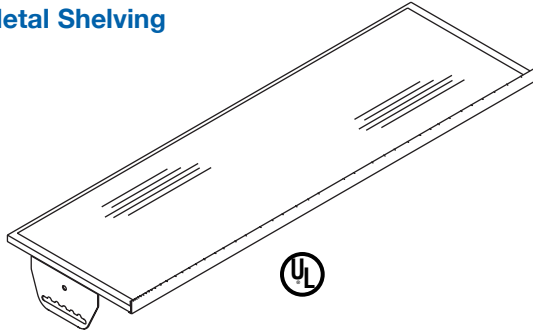


## D4 MAS/SAS 36" Accessories



For 36" length models see these two pages for accessory options.  
For all other lengths refer to D4 accessory section.

### Metal Shelving



- Adjustable Height, Depth, Angle
- Four Depths
- Solid Surface
- Up to 150 lbs. Capacity
- U.L. Listed

The adjustable shelf comes in four depths and is available with an ESD laminate surface. Weight capacity of the standard shelf is 75 lbs. (150 lbs. for the heavy duty shelf) evenly distributed. Shelves are UL Listed structural components.

#### Standard Duty — 75 lb. Maximum Capacity

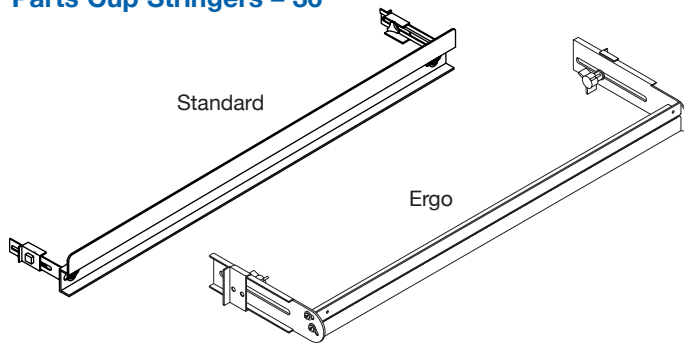
Length	Depth	Standard Laminate	ESD Laminate
36"	10"	2011901	2011941
	12"	2011902	2011942
	14"	2011903	2011943
	18"	2011904	2011944

#### Heavy Duty — 150 lb. Maximum Capacity

Length	Depth	Standard Laminate	ESD Laminate
36"	10"	2012021	2012061
	12"	2012022	2012062
	14"	2012023	2012063
	18"	2012024	2012064

\*Note: 1. When ordering shelves, make sure to specify the appropriate Standard or ESD laminate color code, see page A-16.  
2. ESD laminated shelves come standard with a ground snap in each rear corner and 6" to 48" coiled ground cord.

### Parts Cup Stringers – 36"

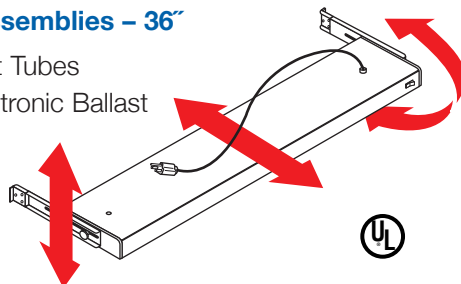


The basic Parts Cup Stringer adjusts up/down and backwards/forwards and accepts industry standard parts cup and other accessories. Ergo Parts Cup Stringers are heavy duty and angle adjustable. The ESD version includes ESD paint, snap and coiled ground cord.

	Standard Finish	ESD Finish
Standard	2012179	2012189
Ergo	2012199	2012209

### D4 Light Fixture Assemblies – 36"

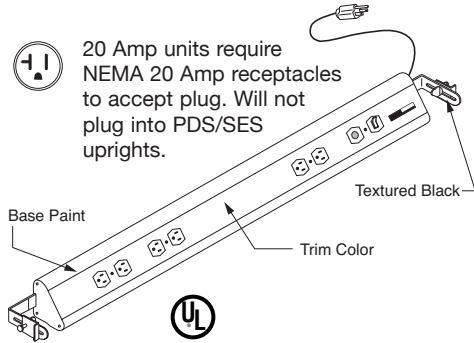
- Use T8 Fluorescent Tubes
- Energy Saving Electronic Ballast



Output	Cord Length	Prismatic Diffuser	Parabolic Diffuser	DOL Diffuser
Standard	2'	2012319	2014519	2012339
	8'	2012309	2014509	2012329
High	2'	2012359	2014539	2012379
	8'	2012349	2014529	2012369
3-Tube	2'	2012399	2014559	2012419
	8'	2012389	2014549	2012409



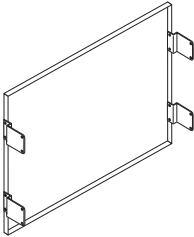
## Electrical Channel Assemblies



36" Long Electrical Channel with three duplex outlets, on/off switch with pilot light, circuit breaker, and molded 8 ft. power cord. UL Listed.

	Part Number
15 Amp	2012219
20 Amp	2012229

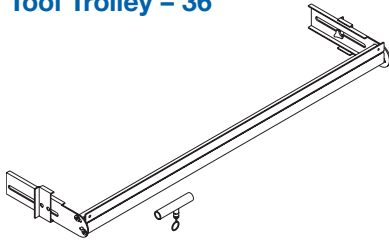
## MAS/SAS Isolation Screens



Mounts between uprights to provide privacy. Available in two heights, 24" and 36". They provide an area to display drawings or other information.

Length	Height	Metal	Fabric	Fabric ESD
36"	24"	2013129	2013149	2013169
	36"	2013139	2013159	2013179

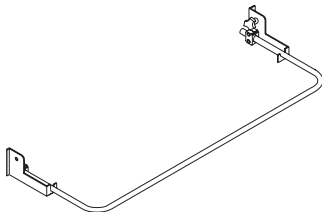
## Tool Trolley – 36"



The Tool Trolley allows the operator to access air tools from above. Includes one side tool hanger as standard.

	Tool Trolley Assembly	Extra Tool Hanger
Standard (25 lbs. max.)	2012458	2012459
Heavy Duty (35 lbs. max)	2012469	2012468

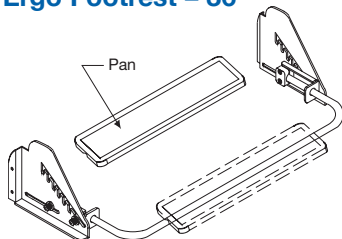
## Standard Footrest – 36"



Promotes correct posture for increased comfort and reduced fatigue; optional footrest pan attaches to the footrest tube assembly pictured here.

	Part Number
Standard Footrest	2012129
Footrest Pan 24"	2012157

## Ergo Footrest – 36"



Full adjustability.

	Part Number
Ergo Footrest	2012156
Footrest Pan 24"	2012157



Mobile Cabinets are lockable storage units that can be conveniently wheeled throughout a work area. Available in a wide variety of drawer and cabinet configurations, and with a broad selection of paint and laminate choices to fit into any environment.

All Mobile Cabinets are equipped with top quality 100 lbs. capacity, full extension metal ball bearing slides.

**FEATURES:**

- All metal construction using heavy gauge steel
- Safety Recessed Handles
- Optional locking mechanism available
- Standard or ESD laminate top surfaces self-edged

Laminate

Base paint color

Contrast paint color

Optional locks

Top surface finished in Standard laminate

Optional lock

3" plate casters are standard. Optional casters available – call factory





## Mobile Cabinet Configuration

### ordering tips from IAC...

- 1 Specify by Part Number based on Drawer/Locker configuration and laminate type used on top – Standard or ESD.
- 2 Specify a paint and contrast paint color as separate line items on the order. See colors on page A-14.
- 3 Specify a laminate color. See colors on page A-16.
- 4 List any options as separate line items on your order.
- 5 Call factory for information on alternate casters.

### Cabinet Options

Extra Cabinet Shelf – for use with full 18" and 24" lockers

**Part Number**  
2050031

Cylinder Lock

**Part Number**  
2050033

Locking Mechanism – Gang locks all drawers and lockers in cabinet

Mount	Part Number
Right-Hand	1050038
Left-Hand	2050034

Master Key Set

**Part Number**  
2050035

### Left-Hand Cabinets



Full 24" locker w/shelf

Standard:  
**1050606**  
ESD:  
**1050656**



Double 12" locker

Standard:  
**1050619**  
ESD:  
**1050669**



Single 6" drawer & 18" locker w/shelf

Standard:  
**1050603**  
ESD:  
**1050653**



Double 6" drawer & 12" locker

Standard:  
**1050612**  
ESD:  
**1050662**



Double 3" drawer & 18" locker w/shelf

Standard:  
**1050614**  
ESD:  
**1050664**



Four 3" drawers & 12" locker

Standard:  
**1050616**  
ESD:  
**1050666**



Double 12" file drawer

Standard:  
**1050609**  
ESD:  
**1050659**



Double 6" drawer & 12" file drawer

Standard:  
**1050604**  
ESD:  
**1050654**



Four 6" drawers

Standard:  
**1050601**  
ESD:  
**1050651**



Four 3" drawers & 12" drawer

Standard:  
**1050617**  
ESD:  
**1050667**



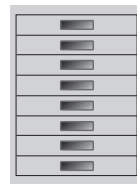
Double 3" drawer, three 6" drawers

Standard:  
**1050607**  
ESD:  
**1050657**



Four 3" drawers, two 6" drawers

Standard:  
**1050608**  
ESD:  
**1050658**



Eight 3" drawers

Standard:  
**1050610**  
ESD:  
**1050660**

### Right-Hand Cabinets



Full 24" locker w/shelf

Standard:  
**1050605**  
ESD:  
**1050655**



Double 12" locker

Standard:  
**1050618**  
ESD:  
**1050668**



Single 6" drawer & 18" locker w/shelf

Standard:  
**1050602**  
ESD:  
**1050652**



Double 6" drawer & 12" locker

Standard:  
**1050611**  
ESD:  
**1050661**



Double 3" drawer & 18" locker w/shelf

Standard:  
**1050613**  
ESD:  
**1050663**



Four 3" drawers & 12" locker

Standard:  
**1050615**  
ESD:  
**1050665**

## IAC Roller Conveyor Systems

Roller Conveyors consist of metal or plastic rollers inlaid into the worksurface or mounted in a frame system. They can be either manually operated (gravity feed) or power driven.

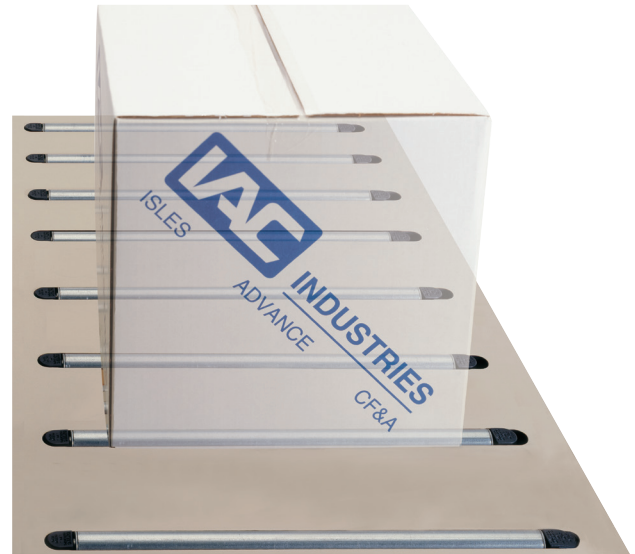
- Typically selected when moving large objects such as boxes or tote bins, or more specifically when operator pacing is preferred.



### Typical Roller Conveyor Examples



Inlaid Skate Wheel Roller Conveyor



Roller Conveyor

### ordering tips from IAC...

- 1 Consider vertical reach along with horizontal reach if the conveyor is located above worksurface.
- 2 Allow sufficient work area to perform tasks and store tools.
- 3 See the Application Support form at the end of this section. IAC engineers will assist in the selection and application of conveyor systems.

## IAC Ball Transfer Systems

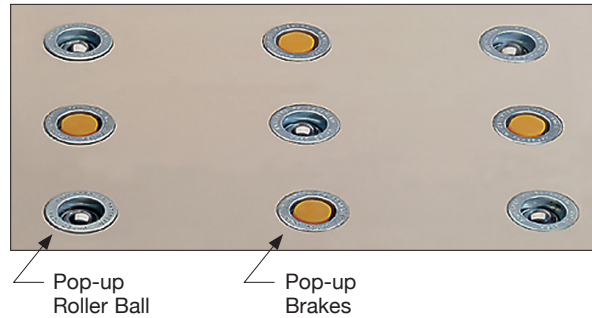
Ball Transfer Systems use rotating balls seated individually within metal flanged cylinders that are on top or inset into a worksurface.

The balls are made of stainless steel, and have a smooth uniform surface so they can rotate in place easily.

Each ball unit is capable of lifting up to 20 lbs.

There are two types of Ball Transfer Systems

- Fixed: designed for simple transport of objects across the worksurface.
- Pneumatic “pop-up” or “retractable”: designed for applications in which the worksurface sees duty for both transport and as a task work area.



### ordering tips from IAC...

See the Application Support form at the end of this section. IAC engineers will assist in the selection and application of conveyor systems.



Pneumatic Actuator – foot operated

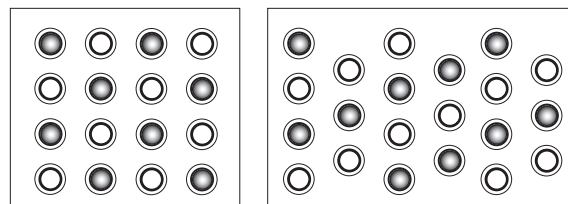


Pneumatic Actuator – mounted underneath worksurface

### Typical Ball Pattern Configurations

IAC uses Ball Transfer Systems that have been specifically designed for integration with workstations. Pattern configurations can be customized according to your needs and applications. **Consult IAC with your specific requirements.**

### Pattern Examples



● – Roller Balls

○ – Brakes

## Worksurface Pop-Up Ball and Roller Transfer Application Support

All requests for IAC Industries' engineering support with worksurfaces involving ball patterns and rollers are answered as quickly as possible. Please fill out the information below. This will enable IAC to better understand the application and give a quick and sound solution.

Your Name \_\_\_\_\_  
 Company \_\_\_\_\_  
 Address \_\_\_\_\_  
 Phone Number \_\_\_\_\_  
 Fax Number \_\_\_\_\_  
 E-mail Address \_\_\_\_\_

### Worksurface Information

#### Type of Worksurface

Non ESD Laminate   
 ESD Laminate   
 Stainless Steel   
 Maple   
 Other \_\_\_\_\_

#### Surface Size

Depth (inches) \_\_\_\_\_  
 Length (inches) \_\_\_\_\_  
 Height (inches) \_\_\_\_\_  
 Straight  Curved   
 Other (please attach drawing)

#### Delivery Method

Conveyor   
 Cart   
 Manually   
 Over Head Hoist   
 Other \_\_\_\_\_

### Material Information

#### Dimension of Object #1

Length \_\_\_\_\_  
 Height \_\_\_\_\_  
 Width \_\_\_\_\_  
 Weight \_\_\_\_\_

#### Bottom Material

Cardboard   
 Plastic   
 Metal   
 Plywood

#### Bottom Shape

Hard   
 Flat   
 Solid   
 Uneven

Describe: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

#### Dimension of Object #2

Length \_\_\_\_\_  
 Height \_\_\_\_\_  
 Width \_\_\_\_\_  
 Weight \_\_\_\_\_

#### Bottom Material

Cardboard   
 Plastic   
 Metal   
 Plywood

#### Bottom Shape

Hard   
 Flat   
 Solid   
 Uneven

Describe: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### Direction and Orientation for the Surface

#### Object Direction Flow (check all that apply)

Object Enters

Left  Right  Front  Back

Object Exits

Left  Right  Front  Back

Object Movement

Turn  No Turn

Side to Side  Front to Back

#### Working Position of Object

Center of worksurface   
 Object (please specify) \_\_\_\_\_  
 Work Environment (i.e. clean with no grease) \_\_\_\_\_

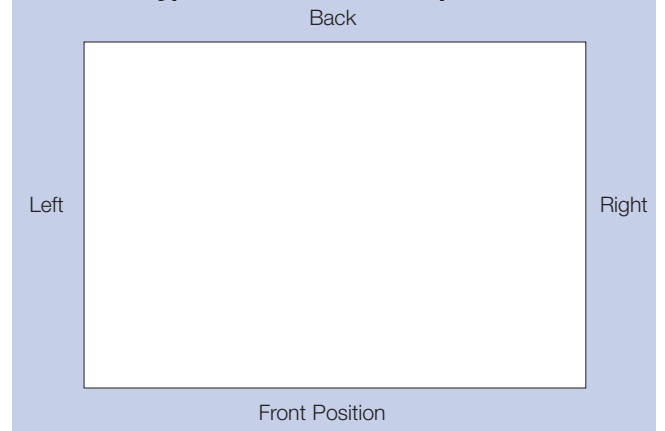
#### Pop-Up Ball Transfer

#### Roller Conveyor System

Plastic  Galvanized  Other \_\_\_\_\_

Skate wheel metal only  Other \_\_\_\_\_

#### Typical Worksurface Top View



IAC's engineering and ergonomics specialists can recommend a ball transfer system configuration that will meet the demands of your application as well as your requirements for integration with conveyors, workstations, rolling carts, racks, and other material handling equipment.

## Designing Ball Transfer Patterns

Because ball transfers are modular, they lend themselves to an infinite variety of handling patterns. The three most important things to consider in selecting a pattern that is most practical for the planned application are:

### 1. Size of the object being transferred

Smaller footprints (the carrying pallet or tray, or even the item itself) will require a tighter ball pattern than larger footprints. The goal is to maintain a level surface to stabilize and support the item completely.

### 2. Weight of the object

Even distribution of the object's weight, relative to its footprint, aids stability. Ball pattern density, i.e. how closely they are spaced, is calculated based on desired per-square-foot loading.

### 3. Bottom surface of the object

If the material of the object, pallet or box that comes in contact with the transfer balls is hard and smooth, it is less likely to "break down" under the weight of the object and the indentation effect of the balls. For example, a plastic bin or tote carrier with a solid, flat bottom is easier to transport at higher weights than a light duty corrugated carton.

A ball transfer system is ideally included in the original specifications for a new workstation, although field retrofit is possible. Once an appropriate ball pattern is determined, several other factors come into play:

### 4. Transfer path

Plan the object's path and distance in relation to the people using it. Will it be straight, perpendicular, angled or omni-directional? Will more than one person, or some sort of conveyor system, be needed to complete the object's transfer from one point to the next?

### 5. Environmental cleanliness

The system could be damaged if grit and particulates become lodged in the ball wells. Keep the work surface clean and free of small parts that could be swept into the wells and damage the pneumatic air transport system.

### 6. Sufficient worksurface between balls

If the ball transfer surface is also used as a work area, plan a pattern that allows a maximum amount of clear surface. Once the balls are retracted, there should be enough solid surface area between them for the worker's tools and parts.