Pre-Approved Ergonomic Products Guide

University of California, Santa Cruz



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Vendor Information

UCSC Ergonomic Product Vendors

Several vendors have negotiated purchase agreements with UCSC which provide significant discounts off the list price for specified items.

Please visit the <u>UCSC Vendors</u> web page for more information on UCSC vendors. (http://ehs.ucsc.edu/safety/pubs/ergo/vendors.php)



Desks & Workstations

General Considerations for Recommending a Height-Adjustable Work Surface

- A height-adjustable work surface may be appropriate for a user who needs to change between sitting and standing at the same workstation during the course of the workday
- Some individuals who ask for height-adjustable work surfaces are injured workers. Please note that an injured worker may need an assessment and recommendations by a professional ergonomist or medical provider before significant workstation changes should be considered. Contact EH&S and/or Risk Services for assistance
- In some cases an adjustable keyboard platform may be suitable instead of or in addition to a height-adjustable work surface (see "<u>General Considerations for</u> <u>Recommending a Keyboard Platform</u>" on page <u>109</u>). Advantages of a keyboard/mouse platform include:
 - A thin platform may be especially helpful for workers who need the keyboard positioned very close to the level of their laps
 - The user can pull the keyboard and mouse close and push them away for fine positioning without being required to move the chair
 - The keyboard and mouse are off of the desk, leaving more work surface space available
- The major categories of adjustable work surfaces and their general characteristics are:
 - Pin-height adjustable
 - Most economical of the adjustable tables
 - Most difficult to adjust, may require knowledgeable assistance
 - Best for applications in which the table height does not have to be readjusted once it is set for the user
 - Weight limits, when used for normal office applications, should be a minor issue because the table should not be adjusted while objects are on it
 - Crank adjustable
 - Most economical of the end-user-adjustable tables
 - Cranking the table may be difficult for some end users
 - Air-assisted
 - More economical than electric desks and simpler to adjust than crank desks
 - They have a greater height range than do the crank-adjustable desks



- May require the user to press and lean on the desk in order to lower it; may be difficult for some end users
- Electrically adjustable
 - Most expensive of the adjustable tables; easiest to adjust
 - They have the highest weight capacity and greatest height range of the end-user-adjustable tables
 - Power surges or outages and other factors may affect the tables' ability to adjust
- Common configurations include:
 - Corner bi-level (aka "dual") surface
 - Rectangular (or "straight") bi-level ("dual") surface
 - Rectangular (or "straight")
- When considering recommending a height-adjustable work surface, answer the following questions:
 - Does the individual require that a single workstation be used at different heights (or could s/he perform some tasks sitting at one surface and other tasks standing at another available surface)?
 - Do many of the work items (such as computer equipment, telephone, papers, hole punch, stapler, binders, organizers, etc., need to be used at multiple heights along with the user?
 If many items need to change heights with the user, consider a large adjustable work surface

If few items need to change heights, consider a small adjustable work surface

• Will the table remain at one height most of the time, and not often be changed?

If so, consider a pin- or crank-adjustable work surface, checking to ensure that the height range and other features are suitable for the individual

• Does the user feel physically capable of pressing and leaning down on the work surface to lower it down, and is the combined weight of the work items relatively small?

If so, consider an air-assisted work surface such as the Steelcase Airtouch If not, consider an electrically height-adjustable work surface such as the Steelcase Electrically Adjustable Desk

• Would the user benefit from use of a keyboard/mouse surface that adjusts independently of the main surface in height and angle? Would the user also tolerate the following: supports that extend down beneath the keyboard/mouse surface; and a gap between the monitor surface and the keyboard/mouse surface?

If both answers are 'yes', consider a bi-level work surface



Steelcase Avenir Adjustable-Height Bi-Level Corner Worksurface, w/Crank

Listed on UCSC Product list as:

Steelcase Corner Dual Desk w/ crank; Product Code QMCKDC42C



Manufacturer's Comments

The Avenir line offers a range of storage solutions and worksurface options that not only manage information, but also help to create a more effective workspace. It includes components to help you create a workspace that perfectly meets the needs of your business today, and in the future. Built on a 6" planning module, Avenir components have the ability to work freestanding, panel-supported, or a combination of both.

Manufacturer's Description

- Table top has a wood core with a High-Pressure Laminate or wood veneer surface and is 13/16" thick.
- Vinyl edge is continuous around all edges of the table
- Radius corner eliminates sharp edges and is appropriate for freestanding, mobile furniture
- Hand crank allows seated left- or right-handed users to raise or lower the monitor worksurface
- Crank can be stored away when not in use



- Keyboard worksurface on dual worksurfaces is supported by a spring mechanism that allows it to adjust to positions up to 6" higher or 5" lower than the monitor worksurface
- Knob adjusted keyboard surface tilts with a range of 25° (+15°, -10° from neutral)
- Release lever activates continuous height adjustment of keyboard surface
- Leveling glides adjust to install unit on uneven floors
- Surface dimensions: 221/4" D x 391/4" W
- Height of main (monitor) surface: Minimum 261/2", Maximum 393/4"

Notes: Adjustable-height tables support a total of 150 pounds. On two-surface units, the monitor surface will support up to 130 pounds and the keyboard surface will support up to 20 pounds.

Crank drives worm screw in leg of straight single, straight dual, corner single, and corner dual tables to raise or lower table. Chain connects to height-adjustment mechanism in adjacent leg so it moves up or down in sync with crank leg. Crank handle can be used in either leg. Crank-adjustable, adjustable-height tables will travel 1" for approximately every 6.5 turns of the crank handle.

Manufacturer's Website (includes a link to the Manufacturer's Specification Guide): http://www.steelcase.com/en/products/category/workspace/panel/avenir/Pages/overvie w.aspx

Considerations for Recommending the Steelcase Avenir Adjustable-Height Bi-Level Corner Worksurface, with Crank

Before selecting a work surface, read the *General Considerations* for *Recommending a Height-Adjustable Work Surface* on page $\frac{2}{2}$.

Pro:

- Crank-adjustable are generally the most economical of the height-adjustable work surfaces
- Bi-level surface enables relatively easy adjustment of the keyboard/mouse surface independently of the monitor surface
- May be a good solution for an individual user who benefits from a standing work position and does not frequently need to change the desk height

<u>Con</u>:

- The supports for the keyboard/mouse surface may reduce the clearance for legs and equipment beneath the work surface
- The table supports on the floor may limit movement of the chair casters and the user's feet



- Cranking the table can potentially be repetitive, forceful and awkward (proper body mechanics should be used to reduce the risk of injury)
- Cranking the table can be difficult due to work items being in the way on the top of the work surface.
- The height range is smaller than that of the air-assisted and electric tables, and may not go low enough or high enough for some users
- The gap between the monitor and keyboard/mouse surfaces may be undesirable to some users



Steelcase Avenir Adjustable-Height Bi-Level Straight Worksurface, w/Crank

Listed on UCSC Product list as:

Steelcase Straight Dual Desk w/ crank; Product Code QMCKDS42C



Manufacturer's Comments

The Avenir line offers a range of storage solutions and worksurface options that not only manage information, but also help to create a more effective workspace. The Avenir systems line includes components to help you create a workspace that perfectly meets the needs of your business today, and in the future. Built on a 6" planning module, Avenir components have the ability to work freestanding, panel-supported, or a combination of both.

Manufacturer's Description

- Table top has a wood core with a High-Pressure Laminate or wood veneer surface and is 13/16" thick.
- Vinyl edge is continuous around all edges of the table
- Radius corner eliminates sharp edges and is appropriate for freestanding, mobile furniture
- Hand crank allows seated left- or right-handed users to raise or lower the monitor worksurface
- Crank can be stored away when not in use



- Keyboard worksurface on dual worksurfaces is supported by a spring mechanism that allows it to adjust to positions up to 6" higher or 5" lower than the monitor worksurface
- Knob adjusted keyboard surface tilts with a range of 25° (+15°, -10° from neutral)
- Release lever activates continuous height adjustment of keyboard surface
- Leveling glides adjust to install unit on uneven floors
- Surface dimensions: 391/4" D x 40" W
- Height of main (monitor) surface: Minimum 261/2", Maximum 393/4"

Notes: Adjustable-height tables support a total of 150 pounds. On two-surface units, the monitor surface will support up to 130 pounds and the keyboard surface will support up to 20 pounds.

Crank drives worm screw in leg of straight single, straight dual, corner single, and corner dual tables to raise or lower table. Chain connects to height-adjustment mechanism in adjacent leg so it moves up or down in sync with crank leg. Crank handle can be used in either leg. Crank-adjustable, adjustable-height tables will travel 1" for approximately every 6.5 turns of the crank handle.

Manufacturer's Website (includes a link to the Specification Guide):

http://www.steelcase.com/en/products/category/workspace/panel/avenir/Pages/overvie w.aspx

Considerations for Recommending the Steelcase Avenir Adjustable-Height Bi-Level Straight Worksurface, with Crank

Before selecting a work surface, read the *General Considerations* for *Recommending a Height-Adjustable Work Surface* on page $\frac{2}{2}$.

<u>Pro</u>:

- Crank-adjustable are generally the most economical of the height-adjustable work surfaces
- Bi-level surface enables relatively easy adjustment of the keyboard/mouse surface independently of the monitor surface
- May be a good solution for an individual user who benefits from a standing work position and does not frequently need to change the desk height

<u>Con</u>:

- The supports for the keyboard/mouse surface may reduce the clearance for legs and equipment beneath the work surface
- The table supports on the floor may limit movement of the chair casters and the user's feet



- Cranking the table can potentially be repetitive, forceful and awkward (proper body mechanics should be used to reduce the risk of injury)
- Cranking the table can be difficult due to work items being in the way on the top of the work surface
- The height range is smaller than that of the air-assisted and electric tables, and may not go low enough or high enough for some users
- The gap between the monitor and keyboard/mouse surfaces may be undesirable to some users



Steelcase Details AdjusTables Series 3 Crank-Adjustable 90-Degree Corner Desk

Listed on UCSC Product list as:

Steelcase Single Level Desk Crank Corner 58x23x58x23; Product Code A3LQ58235823U





Manufacturer's Description

Series 3 complies with all ANSI/BIFMA standards as it delivers full seated-height adjustability and greatly reduces the cost of workplace churn by eliminating the need for an installer to move a fixed-height worksurface.

Product Features:

- Dimensions: 58" wide left and right; 23" deep left and right
- Height Range is 22" 34" (assumes .5" glide adjustment)
- 220 lbs. dynamic load bearing capacity per table (including worksurface)
- Lifting columns controlled by manually operated drives
- Crank handle can be removed for storage or remain fixed and stored in place
- All assemblies meet or exceed ANSI/BIFMA standards
- More than just a worksurface; add the right work tools and it becomes a fully adjustable workstation
- Universal Worksurfaces are SCS Indoor Advantage[™] Certified for indoor air quality

Manufacturer's Website: http://details-worktools.com/products/series-3-90-degree/



Considerations for Recommending the Steelcase Details AdjusTables Series 3 Crank-Adjustable 90-Degree Corner Desk

Before selecting a work surface, read the General Considerations for Recommending a Height-Adjustable Work Surface on page $\frac{2}{2}$.

Pro:

- Adjustable without tools or specialized skills
- Height range is adequate for virtually all seated users
- Crank on the front of the desk is easier to use compared to some crank-adjustable desks that require reaching over the work surface
- Crank can stow under the desk without detaching, preventing misplacement of the crank

<u>Con</u>:

- Height range does not accommodate standing work
- Raising a large desk with a crank is forceful and repetitive. Some users will avoid adjusting the desk or will not tolerate it physically (this may not be a problem at a single-user workstation that can keep the desk height the same once set for the individual)
- The floor supports may limit placement of mobile pedestals near the sides of the desk



Steelcase Details AdjusTables Series 3 Crank-Adjustable Rectangular Desk

Listed on UCSC Product list as:

Steelcase Single Level Crank Desk Straight 70x29; Product Code A3RQ702929U





Manufacturer's Description

Series 3 complies with all ANSI/BIFMA standards as it delivers full seated-height adjustability and greatly reduces the cost of workplace churn by eliminating the need for an installer to move a fixed-height worksurface.

Product Features:

- Dimensions: 70" wide; 29" deep
- Height Range is 22" 34" (assumes .5" glide adjustment)
- 220 lbs. dynamic load bearing capacity per table (including worksurface)
- Lifting columns controlled by manually operated drives
- Crank handle can be removed for storage or remain fixed and stored in place
- All assemblies meet or exceed ANSI/BIFMA standards
- More than just a worksurface; add the right work tools and it becomes a fully adjustable workstation
- Universal Worksurfaces are SCS Indoor Advantage[™] Certified for indoor air quality

Manufacturer's Website: http://details-worktools.com/products/series-3-rectangular/



Considerations for Recommending the Steelcase Details AdjusTables Series 3 Crank-Adjustable Rectangular Desk

Before selecting a work surface, read the General Considerations for Recommending a Height-Adjustable Work Surface on page $\frac{2}{2}$.

<u>Pro</u>:

- Adjustable without tools or specialized skills
- Height range is adequate for virtually all seated users
- Crank on the front of the desk is easier to use compared to some crank-adjustable desks that require reaching over the work surface
- Crank can stow under the desk without detaching, preventing misplacement of the crank

<u>Con</u>:

- Height range does not accommodate standing work
- Raising a desk with a crank can be forceful and repetitive. Some users will avoid adjusting the desk or will not tolerate it physically (this may not be a problem at a single-user workstation that can keep the desk height the same once set for the individual)
- The floor supports may limit placement of mobile pedestals near the sides of the desk



Steelcase Details AdjusTables Series 5 Height-Adjustable 90-Degree Corner Desk

Listed on UCSC Product list as:

Steelcase Single Level Desk Electric corner 58x23x58x23; Product Code A5LQ58235823U





Manufacturer's Description

Series 5 is a full sit-to stand electric height-adjustable worksurface that easily moves for people who need to. It helps to contain the cost of those moves while delivering a complete range of ergonomic postural benefits.

Product Features:

- Dimensions: 58" wide left and right; 23" deep left and right
- Electric height adjustability range of 25.50"-52"
- Infinite height adjustments within the range
- Controller offers up/down buttons
- Load bearing capacity of 220lbs. per table
- Motor is exposed
- Universal Worksurfaces are SCS Indoor Advantage[™] Certified for indoor air quality

Manufacturer's Website: http://details-worktools.com/products/series-5-90-degree/



Considerations for Recommending the Steelcase Details AdjusTables Series 5 Height-Adjustable 90-Degree Corner Desk

Before selecting a work surface, read the *General Considerations for Recommending a Height-Adjustable Work Surface* on page $\underline{2}$.

<u>Pro</u>:

- Highly adjustable with the touch of a button
- Height range is adequate for most seated users and virtually all standing users

Con:

• The floor supports may limit placement of mobile pedestals near the sides of the desk



Steelcase Details AdjusTables Series 5 Height-Adjustable Rectangular Desk

Listed on UCSC Product list as:

Steelcase Single Level Electric Desk Straight 70X29; Product Code A5RQ702929U





Manufacturer's Description

Series 5 is a full sit-to stand electric height-adjustable worksurface that easily moves for people who need to. It helps to contain the cost of those moves while delivering a complete range of ergonomic postural benefits.

Product Features:

- Dimensions: 70" wide; 29" deep
- Electric height adjustability range of 25.50"-52"
- Infinite height adjustments within the range
- Controller offers up/down buttons
- Load bearing capacity of 220lbs. per table
- Motor is exposed
- Universal Worksurfaces are SCS Indoor Advantage[™] Certified for indoor air quality

Manufacturer's Website: http://details-worktools.com/products/series-5-rectangular/



Considerations for Recommending the Steelcase Details AdjusTables Series 5 Height-Adjustable Rectangular Desk

Before selecting a work surface, read the *General Considerations* for *Recommending a Height-Adjustable Work Surface* on page $\frac{2}{2}$.

<u>Pro</u>:

- Highly adjustable with the touch of a button
- Height range is adequate for most seated users and virtually all standing users

<u>Con</u>:

• The floor supports may limit placement of mobile pedestals near the sides of the desk



Steelcase Airtouch Dual-Corner Adjustable-Height Worksurface

Listed on UCSC Product list as: Steelcase Corner Dual Desk – Airtouch; Product Code BAPDC2442



Manufacturer's Description

Airtouch can be adjusted single-handedly to any height on the fly, easily going from seated to standing and back again. Simply set the adjustment gauge to meet typical worksurface weight load, then use the adjustment lever to raise and lower the worksurface. Because Airtouch doesn't have any electrical components, it can be used anywhere.

Product Features:

- Table top has a wood core with a High-Pressure Laminate or wood veneer surface and is 13/16" thick.
- Vinyl edge is continuous around all edges of the table
- Radius corner eliminates sharp edges and is appropriate for freestanding, mobile furniture
- Dimensions: A = 22¼", B = 39¼"
- Air-assisted adjustable-height column mechanism
- Ergonomic lift handle activates smooth, effortless height adjustments
- Height of the monitor surface from 26"H to 43"H, the keyboard surface moves along with it



- Keyboard worksurface on dual worksurfaces is supported by a dual arm spring mechanism that allows it to adjust to positions up to 6" higher or 5" lower than the monitor worksurface
- Release lever activates continuous height adjustment of keyboard surface
- Knob adjusted keyboard surface tilts with a range of 25° (+15°, -10° from neutral)

Notes: Airtouch adjustable-height worksurfaces are designed to support up to 150 pounds including the table top. An adjustable feature on the column allows the amount of lift assist to be set for various cargo loads. Worksurface performance is optimal within 15 pounds above or below this adjustable setting. Do not exceed 115 pounds.

Manufacturer's Website:

http://www.steelcase.com/en/products/category/tables/adjustable/airtouch/pages/overview.aspx

Considerations for Recommending the Steelcase Airtouch Dual-Corner Adjustable-Height Worksurface

Before selecting a work surface, read the *General Considerations* for *Recommending a Height-Adjustable Work Surface* on page $\frac{2}{2}$.

<u>Pro</u>:

- Air-assisted are more economical than electric desks and easier to adjust than crank desks
- Bi-level surface enables relatively easy adjustment of the keyboard/mouse surface independently of the monitor surface

Con:

- An air-assisted desk may require the user to press and lean on the desk in order to lower it.
- The weight limit is lower than that of an electric desk
- The height range is smaller than that of the electric tables
- The support post and floor supports may limit movement of the chair casters and the user's feet
- The gap between the monitor and keyboard/mouse surfaces may be undesirable to some users



Steelcase Airtouch Dual-Surface Adjustable-Height Worksurface

Listed on UCSC Product list as: Steelcase Straight Dual Desk Airtouch; Product Code BAPDS3642





Manufacturer's Description

Airtouch can be adjusted single-handedly to any height on the fly, easily going from seated to standing and back again. Simply set the adjustment gauge to meet typical worksurface weight load, then use the adjustment lever to raise and lower the worksurface. Because Airtouch doesn't have any electrical components, it can be used anywhere.

Product Features:

- Table top has a wood core with a High-Pressure Laminate or wood veneer surface and is 13/16" thick.
- Vinyl edge is continuous around all edges of the table
- Radius corner eliminates sharp edges and is appropriate for freestanding, mobile furniture
- Dimensions: A = 34¼", B = 40"
- Air-assisted adjustable-height column mechanism
- Ergonomic lift handle activates smooth, effortless height adjustments
- Height of the monitor surface from 26"H to 43"H, the keyboard surface moves along with it
- Keyboard worksurface on dual worksurfaces is supported by a dual arm spring mechanism that allows it to adjust to positions up to 6" higher or 5" lower than the monitor worksurface
- Release lever activates continuous height adjustment of keyboard surface



- Knob adjusted keyboard surface tilts with a range of 25° (+15°, -10° from neutral)
- Notes: Airtouch adjustable-height worksurfaces are designed to support up to 150 pounds including the table top. An adjustable feature on the column allows the amount of lift assist to be set for various cargo loads. Worksurface performance is optimal within 15 pounds above or below this adjustable setting. Do not exceed 115 pounds.

Manufacturer's Website:

http://www.steelcase.com/en/products/category/tables/adjustable/airtouch/pages/overview.aspx

Considerations for Recommending the Steelcase Airtouch Dual-Surface Adjustable-Height Worksurface

Before selecting a work surface, read the *General Considerations* for *Recommending a Height-Adjustable Work Surface* on page $\underline{2}$.

<u>Pro</u>:

- Air-assisted are more economical than electric desks and easier to adjust than crank desks
- Bi-level surface enables relatively easy adjustment of the keyboard/mouse surface independently of the monitor surface

Con:

- An air-assisted desk may require the user to press and lean on the desk in order to lower it
- The weight limit is lower than that of an electric desk
- The height range is smaller than that of the electric tables
- The support post and floor supports may limit movement of the chair casters and the user's feet
- The gap between the monitor and keyboard/mouse surfaces may be undesirable to some users



Steelcase Airtouch Single Level Desk

Listed on UCSC Product list as: Steelcase Single Level Desk (Airtouch); Product Code BAPSS2442



Manufacturer's Description

Airtouch can be adjusted single-handedly to any height on the fly, easily going from seated to standing and back again. Simply set the adjustment gauge to meet typical worksurface weight load, then use the adjustment lever to raise and lower the worksurface. Because Airtouch doesn't have any electrical components, it can be used anywhere.

Product Features:

- Table top has a wood core with a High-Pressure Laminate or wood veneer surface and is 13/16" thick
- Vinyl edge is continuous around all edges of the table
- Dimensions: 22¹/₄" deep; 40" wide
- Height of the surface adjusts from 26"H to 43"H
- Air-assisted adjustable-height column mechanism
- Ergonomic lift handle activates smooth, effortless height adjustments

Notes: Airtouch adjustable-height worksurfaces are designed to support up to 150 pounds including the table top. An adjustable feature on the column allows the amount of lift assist to be set for various cargo loads. Worksurface performance is optimal within 15 pounds above or below this adjustable setting. Do not exceed 115 pounds.



Manufacturer's Website:

http://www.steelcase.com/en/products/category/tables/adjustable/airtouch/pages/overview.aspx

Considerations for Recommending the Steelcase Airtouch Single Level Desk

Before selecting a work surface, read the *General Considerations for Recommending a Height-Adjustable Work Surface* on page $\frac{2}{2}$.

Pro:

- Air-assisted are more economical than electric desks and easier to adjust than crank desks
- Some users prefer single-level (rather than dual level) as there is no open gap between keyboard and monitor

Con:

- An air-assisted desk may require the user to press and lean on the desk in order to lower it
- The weight limit is lower than that of an electric desk
- The height range is smaller than that of the electric tables
- The support post and floor supports may limit movement of the chair casters and the user's feet



Steelcase Ellipse 24" Desk w/ Modesty Panel & Pin-Adjustable Legs

Listed on UCSC Product list as:

Steelcase Side Return Table (24x42 w/ pin height adjustable); Product Code ADXM2442LA



Manufacturer's Description

Ellipse offers the flexibility of freestanding furniture, with the performance you expect from a complete office system. Ellipse provides a comprehensive freestanding office solution with built-in flexibility. Desks can be used alone, or linked to create a variety of configurations. Technology is routed directly to the user with integrated wire and cable management.

Product Features:

- Table top has a wood core with a high-pressure laminate or wood veneer surface and is 13/16" thick
- Surface material wraps front and back edges and ends of worksurfaces are finished with a vinyl edge
- Sloped edge on user side of worksurfaces increases comfort
- Included modesty panel ends 71/2" above the floor
- Grommets are standard on both the left- and right-hand side of desks and returns and allow cords and cables to pass through the worksurface
- Access covers on legs are removable to allow cords and cables to be routed inside the legs
- Adjustable legs allow worksurfaces to be supported at any height from 24½" to 32" in ½" increments
- Concealed leveling glides adjust 5/8" to allow installation on uneven floors



• Dimensions are 24" D x 42" W x 281/2" H

Manufacturer's Website:

http://www.steelcase.com/en/products/category/workspace/freestanding/ellipse/pages/o verview.aspx

Considerations for Recommending the Steelcase Ellipse 24" Deep Worksurface w/ Modesty Panel & Pin Adjustable Legs

Before selecting a work surface, read the *General Considerations for Recommending a Height-Adjustable Work Surface* on page $\frac{2}{2}$.

Pro:

- Pin height-adjustable are the most economical of the height-adjustable work surfaces
- May be useful as a primary work surface set to optimal level for the worker or as a "return" surface positioned perpendicular to a primary desk to create an L-shaped setup
- May serve as a secondary work surface at an alternate height for such tasks as writing or reading
- The under surface is free of tracks and large table supports (in contrast to the crank-adjustable work surfaces) for relatively good leg clearance
- Can accommodate installation of an adjustable keyboard/mouse platform on the undersurface

Con:

• Changing the height usually requires tools, strength, and emptying of the work surface. Generally cannot be adjusted by the end-user



Steelcase Ellipse 24" Desk without Modesty Panel (fixed height)

Listed on UCSC Product list as:

Steelcase Side Return Table (24x42 Ellipse w/fixed legs, no modesty); Product Code ADXP2442L4



Manufacturer's Description

Ellipse offers the flexibility of freestanding furniture, with the performance you expect from a complete office system. Ellipse provides a comprehensive freestanding office solution with built-in flexibility. Desks can be used alone, or linked to create a variety of configurations. Technology is routed directly to the user with integrated wire and cable management.

Product Features:

- Dimensions: 24" deep; 42" wide; 28.5" high
- Made of 29 59% recycled content, with up to 10% post-consumer content
- Up to 99% recyclable
- Manufactured using water-based adhesives, and powder-coated finishes that are nearly VOC-free
- Wood surfaces use water-based finishes and top coats and are produced in Steelcase's LEED-certified manufacturing facility
- SCS Indoor Advantage[™] Indoor Air Quality Certified. The program tests and certifies products for compliance with USGBC LEED EQ4.5 (furniture and seating)

Manufacturer's Website (includes a link to the Specification Guide):

http://www.steelcase.com/en/products/category/workspace/freestanding/ellipse/pages/o



Considerations for Recommending the Steelcase Ellipse Desk without Modesty Panel

Before selecting a work surface, read the *General Considerations* for *Recommending a Height-Adjustable Work Surface* on page $\underline{2}$.

Pro:

- Lower than most fixed-height desks, the height may be appropriate for some taller users as a computer work surface
- May be appropriate for use as a secondary surface or as a main computer desk in conjunction with an adjustable keyboard/mouse platform for smaller to average height users
- Costs less than a Steelcase adjustable desk

Con:

• Height cannot be adjusted



Steelcase Universal Side Table, Fixed Height, with Double-Post C-leg w/Glides

Listed on UCSC Product list as:

Steelcase Side Return Table (24X42 Universal); Product Code US2442 and UCL





Manufacturer's Description of Universal Worksurfaces

Universal Worksurfaces is a comprehensive solution of worksurfaces, supports, and privacy screens designed to deliver flexibility, mobility, and options to create inspiring spaces that support the different ways people work.

Features:

- Dimensions: "A" = 24" deep; "B" = 42" wide; 28.5" high
- SCS Indoor Advantage[™] certified for indoor air quality. The program tests and certifies products for compliance with USGBC LEED EQ4.5 (furniture and seating)
- Level[™] 1 certified to the BIFMA e3 sustainability standard. According to BIFMA, the Level[™] conformance mark ensures a comprehensive, independent and impartial assessment of the environmental and social impacts of a product's manufacture

Manufacturer's Website:

http://www.steelcase.com/en/products/category/educational/tables/universal/Pages/over view.aspx

Considerations for Recommending the Steelcase Universal Systems Side Table, Fixed Height, with Double-Post C-leg with Glides



Before selecting a work surface, read the *General Considerations for Recommending a Height-Adjustable Work Surface* on page $\underline{2}$.

<u>Pro</u>:

• May be attached as a desk "return" to a compatible Steelcase Desk, creating an Lshaped desk configuration with a continuous work surface and open leg space

Con:

• Height cannot be adjusted



Steelcase 8500 Series Round Table – 36" Diameter

Listed on UCSC Product list as: Steelcase Workstation Table 36" Round Table; Product Code 853600



Product Features:

- Table is 36" diameter, 281/2" high
- Top is laminate with soft vinyl edge
- Column is 2¼" diameter and painted
- Base features textured paint and adjustable leveling glides of black plastic

Manufacturer's Website:

http://www.steelcase.com/en/products/category/educational/tables/universal/Pages/over view.aspx



Steelcase 27"-High Universal Mobile Pedestal

Listed on UCSC Product list as: Steelcase Mobile Pedestal BBF; Product Code RPM1827AF



Manufacturer's Description

- Mobile pedestals fit under a standard height worksurface and can be moved wherever storage is needed. They can provide an auxiliary worksurface if desired
- Finished back and sides are standard
- Top is 1/8" H steel
- Optional steel, laminate, and wood veneer tops are available in place of standard 1⁄8"H steel top
- Lock is standard on pedestals and secures all drawers. Locks are located in the top drawer and are keyed random. Non-locking pedestal is available as an option
- Four casters are hard composition and non-locking, with a full-rotation swivel mechanism. Casters are concealed by the pedestal base
- Pencil tray to hold small office supplies is included with each pedestal
- All drawers are welded steel construction and open their full depth for total access to the contents
- Box and file drawers are available two box drawers and one file drawer standard
- One divider is included with each box drawer
- File drawer body sides are full height and accommodate front-to-back filing of hanging letter-size file folders
- Optional rails accommodate side-to-side filing of letter, A4, and legal-size hanging file folders
- Additional accessories such as pencil trays, media trays, stationery trays, dividers, and rails are available
- Actual dimensions: 27" H x 15" W x 17¹/₂" D (with standard 1/8" steel top)


Manufacturer's Website: http://www.steelcase.com/en/products/category/storage/peds/universal-storage-pedestal/Pages/overview.aspx



Steelcase 27"-High Universal Fixed Pedestal with 3" Base

Listed on UCSC Product list as: Steelcase Fixed Pedestal BBF; Product Code RPF1827AF



- 27" H fixed pedestals are floor-standing and can support Steelcase worksurfaces at 28½" H
- Top is open and accommodates attachment to a worksurface. Attachment hardware is included
- Finished back and sides are standard
- Lock is standard on pedestals and secures all drawers. Locks are located in the top drawer and are keyed random. Non-locking pedestal is available as an option
- Leveling glides adjust to install pedestals on uneven floors. 27" H pedestals have a 1⁷/₈" adjustable glide range
- Pencil tray to hold small office supplies is included with each pedestal
- All drawers are welded steel construction and open their full depth for total access to the contents
- Two box drawers and one file drawer are standard
- One divider is included with each box drawer
- File drawer body sides are full height and accommodate front-to-back filing of hanging letter-size file folders
- Optional rails accommodate side-to-side filing of letter, A4, and legal-size hanging file folders
- Additional accessories such as pencil trays, media trays, stationery trays, dividers, and rails are available
- Actual dimensions: 27" H x 15" W x 17½" D



Notes: Fixed pedestals are intended to attach under a worksurface for security and support.

Freestanding applications that don't require attachment to a worksurface should be used with an optional conversion kit that includes a steel top, counterweight package, and components to convert the locking system to a safety interlock system.

Manufacturer's Website:

http://www.steelcase.com/en/products/category/storage/peds/universal-storage-pedestal/Pages/overview.aspx



Steelcase Universal Lateral File – 42" W, 18" D, with 2 Drawers

Listed on UCSC Product list as: Steelcase Lateral File – 2-drawer 42W; Product Code RLF18422F



Manufacturer's Description

- Standard 1"H steel top; options available
- Finished back
- Central lock, keyed random
- Drawer fronts are removable
- Ideal for high-density paper storage
- One hanging folder bar included per drawer on 18" D units
- Four adjustable leveling glides
- Counterweight package available, if desired
- Dimensions: 181/8" D x 42" W x 28" H

Manufacturer's Website:

http://www.steelcase.com/en/products/category/storage/lateral/universal-storage-lateralfiles/pages/overview.aspx



Steelcase Universal Vertical File – 4 Drawers & 1 Lift-Up Door with Fixed Shelf

Listed on UCSC Product list as: Steelcase Vertical File Cabinet - 5 drawer; Product Code RWV24155CF

Features

- Provides high-density storage of paper
- Finished back is standard
- Standard top is 1"H steel; options available
- Lift-up door is standard on 651/2"H verticals and includes a fixed shelf. Door lifts above case when opened
- Base is 3" H and is integral to the case
- Leveling glides adjust up to 7/8" to install vertical on uneven floors
- Drawer lock is standard. Lock secures all drawers and is located at the top left corner of the drawer approximately 36" from the floor as shown
- Drawer lock also secures lift-up door on 651/2"H units. Locks are keyed random
- Drawers open their full depth for total access to the contents
- File drawers accommodate front-to-back filing of letter-size hanging folders without the use of additional accessories
- Counterweight packages must be specified for workstation verticals that are not ganged to another tower or bolted to the floor or wall



 Ganging hardware is included to increase stability and maintain alignment by joining adjacent components side by side, back to back, or both. Vertical files can also be bolted to the floor or wall for stability

• Dimensions: 24" D x 15" W x 621/2" H

Manufacturer's Website:

http://www.steelcase.com/en/products/category/storage/lateral/universal-storage-lateral-files/pages/overview.aspx



Steelcase Standard Shelf Light

Listed on UCSC Product list as: Steelcase Overhead Light; Product Code LSM24K



Manufacturer's Description

- Dimensions: 9.25" deep; 24" wide; 1.75" high. Other sizes available from vendor
- 17 watts
- Includes:
 - Light housing with centered on-off switch: black paint
 - End cap cord managers: black plastic only
 - Contrast sleeve around lamp
 - Faceted reflector: white only
 - T8 3500K lamp
 - Ballast
 - Attachment hardware

Manufacturer's Website:

http://www.steelcase.com/en/products/category/lighting/lighting/shelf-lightstandard/pages/overview.aspx

Please see *General Considerations for Desk or Task Lighting* on page <u>254</u> for information on recommending task lighting.



Chairs

General Considerations for Recommending an Ergonomic Chair

- An ergonomic chair has become a standard piece of office equipment. Nearly all seated office workers are already using an ergonomic chair. However, a replacement chair should be considered for an individual if the existing chair:
 - Does not fit and support the worker adequately.
 - Prevents the worker from moving and/or positioning appropriately within the workstation.
 - Is broken and cannot easily be repaired.
 - Is excessively worn.
- When considering an ergonomic chair for an individual worker, answer the following questions:
 - Does the chair suit the general physical build of the individual? Choose from chairs that are designed for small to medium, medium to large, or very large users as appropriate.
 - Does the chair's seat pan provide adequate height, support and clearance for the individual?

Select a chair whose seat pan is wide enough and deep enough to support the individual, and can be adjusted to the proper height for working with the feet supported on the floor or footrest while at the appropriate working level for the desk or work surface. Some chairs may be ordered with an optional cylinder that adjusts higher or lower than standard. Check with the vendor for more information.

- Does the chair's backrest provide adequate lumbar support? Look for a chair whose backrest angle and/or backrest/lumbar support height can be adjusted to closely match the individual's low back curvature in height and contour. [ErgoCruz Pre-Approved chairs have or should be ordered with adjustable lumbar support height (exception: Humanscale Saddle Seat, which does not have a backrest).]
- Does the chair's backrest provide adequate upper back support? Look for a chair whose backrest height and/or angle can be adjusted to closely match the individual's upper back curvature in height and contour, while also supporting the low back.
- Does the chair's backrest angle provide adequate support in the individual's preferred working postures?
 Select a chair whose backrest angle coincides with or can be adjusted to support the individual's working posture.
- Does the chair provide adequate arm support (if needed)?



If needed, choose from chairs whose armrests can be adjusted to provide support just below the individual's elbow level with the arms relaxed near the torso, without crowding or pressing against the hips or torso. Armrests should be able to adjust out of the way when necessary to avoid interfering with active movement such as keyboard and mouse use. [Note: ErgoCruz Pre-Approved chairs can be ordered with or without armrests (exception: Humanscale Saddle Seat, which does not have armrests).]

- Does the chair allow the individual to perform work tasks without bumping into the desk or other furniture?
 Choose a chair whose armrests and overall frame do not limit the worker's movements and proximity to the work tools and furniture.
- On what kind of flooring will the chair be used? Specify hard (standard) casters for carpeted floors, or soft casters for vinyl and hardwood floors.

Please refer to the chair fitting instructions in the Departmental Ergonomics Assessors Training Manual.

General Considerations for Recommending Chair Armrests

Not everyone needs chair armrests. For those who use them for resting the arms, the armrests should ideally be positioned to provide support just below the individual's elbow level with the arms relaxed near the torso, without crowding or pressing against the hips or torso. Armrests should be able to adjust out of the way when necessary to avoid interfering with active movement such as during keyboard and mouse use.



Humanscale Freedom Chair

Listed on UCSC Product list as: Humanscale Freedom Chair with Arms; Product Code F111



Manufacturer's Comments

Winner of 10 design awards to date – including the Design Distinction Award in the prestigious ID Design Review 2000 competition – the Freedom chair by Niels Diffrient has revolutionized the task chair industry. Its weight-sensitive recline and synchronously adjustable armrests set new standards for task chair performance and functionality to keep the sitter exceptionally comfortable while also lowering the risk of long-term injury. The Freedom chair is designed to give the maximum ergonomic benefit to the sitter with a minimum number of manually-adjusted controls. Once the chair is fitted, no further adjustment is required. The idea is that movement, which is essential for a healthy body, shouldn't be constricted by locking mechanisms and manual controls. In other words, sitting comfortably isn't something you should have to think about.

- Recline Action As you recline, you'll maintain a near constant eye level, while the angle between your torso and legs opens up for better body function
- Contoured Cushions The cushions are sculpted to closely follow body contours, which increases contact and decreases concentrated loads. Optional Technogel[®] seat cushion maximizes weight distribution and comfort
- Responsive Backrest The pivoting backrest automatically adapts to the changing needs of your spine during recline



- Synchronous Armrests Freedom's body-friendly, gel armrests move up and down together and stay with you during recline; always keeping you in supported balance
- Body Fit The seat, back and headrest may be independently positioned to fit your exact body size
- Intelligent Mechanism With Freedom's revolutionary counter-balance mechanism, your weight automatically balances the force required to recline the chair. So whether you're big or small, short or tall, the recline tension is always perfectly adjusted to let you move while keeping you fully supported in all positions

Manufacturer Website:

http://humanscale.com/products/product_detail.cfm?group=FreedomTaskChair

Considerations for Recommending the Humanscale Freedom Chair

Before selecting an ergonomic chair, read the *General Considerations* for *Recommending an Ergonomic Chair* on page <u>38</u>.

<u>Pro</u>:

- Adjusts smoothly and easily for small to moderately large users, with adjustable seat, armrest and backrest height; seat depth; armrest pivot
- Armrests adjust in tandem very readily and extremely low, allowing freedom of arm movement and proximity to work
- Backrest recline is weight-activated
- Light weight makes it easy for user to move the chair

<u>Con</u>:

- Armrests could move if user pushes on them to stand up or change position
- Backrest cannot be locked in any position
- Seat angle is not adjustable
- Some users find the seat too firm and the fabric slippery



Humanscale Freedom Saddle Seat

Listed on UCSC Product list as: Humanscale Freedom Saddle Seat; Product Code F300



Manufacturer's comments

The Saddle seat, part of Humanscale's award-winning Freedom seating line, is the most comfortable and versatile stool ever made. Its unique, triangular cushion encourages users to sit in a "saddle" posture, which lowers the thighs, opens up the hips and puts the spine into a healthy lordotic curve. The "saddle" posture also reduces pressure points for long-term comfort and allows users to get closer to their work.

Manufacturer's Description

- Uniquely contoured triangular cushion allows multiple sitting positions for ultimate comfort
- Height adjustable pneumatic cylinder accommodates a wide range of users and tasks
- Optional foot ring and high cylinders for specific applications
- Available in a wide variety of textiles, including wipeable vinyls for lab, cleanroom and healthcare use

Manufacturer Website:

http://humanscale.com/products/product_detail.cfm?group=FreedomSaddleSeat



Considerations for Recommending the Humanscale Freedom Saddle Seat

Before selecting an ergonomic chair, read the *General Considerations* for *Recommending an Ergonomic Chair* on page <u>38</u>.

Pro:

- Saddle design allows for wide-based sitting position
- Promotes open hip angle, which can assist in sitting upright with natural lumbar curve
- May be useful for workers who need to move and reach at the workstation, and/or who have limited leg space under the work surface
- At slightly higher seat levels may allow for light weight-bearing through the legs.
- Height lever is easy to find on each corner

<u>Con</u>:

- Lacks back support
- Requires adjustment period to unusual positioning
- Standard height may be too low for optimal positioning (but available with higher seat range)
- Seat cannot be tilted to adjust sitting angle
- Not recommended for long periods of sitting at a desk/computer



OfficeMaster Paramount 7897 Chair

Listed on UCSC Product List as:

Office Master Multi-Function Task Chair with Headrest, no arms; Product Code 7897 [Note: chair without headrest is Product Code 7893]



Manufacturer's Comments

The Paramount Collection's 7897 chair was designed with smooth flowing lines. It also has a full complement of great adjustable features (including a 4-way adjustable headrest) that make this chair a good selection for a wide range of potential users. Arms are normally sold separately.

Manufacturer's Description

- Overall Width: 25"
- Overall Height: 38-47"
- Back: 20"w x 26"h
- Seat: 20.5"w x 18-20.5"d
- Seat Height: 17-22"
- Arms: Various styles available (optional)
- Warranty: 12 year limited
- Available in a variety of fabric choices and colors

Note: Armrests are sold separately.

Manufacturer's Website:

http://officemaster.com/products/index.php?view=family&product_id=24



Considerations for Recommending the OfficeMaster Paramount 7897 Chair

Before selecting an ergonomic chair, read the *General Considerations for Recommending an Ergonomic Chair* on page <u>38</u>.

<u>Pro</u>:

- Suitable for medium build to moderately large users, with adjustable seat height, angle and depth; backrest height and angle
- Backrest can adjust independently of seat
- Chair can rock and/or lock in reclined (or upright) position
- Highly adjustable headrest for users with special needs
- Available without headrest (Product Code 7893)
- Armrests are available (ordered separately see page <u>54</u>)

<u>Con</u>:

- Front of seat elevates when chair reclines
- Chair is heavier than some other models
- The several adjustment paddles and knobs may seem complex to some users



Office Master Discovery Back (DB) Task Chair

Listed on UCSC Product List as: Office Master Discovery Back Chair, Full Function, no arms; Product Code DB74



Manufacturer's Comments

The Discovery back chair was designed to specifically address users seeking to promote a healthier seating posture. The unique "Pear-Shaped" design of the backrest permits a seated user's shoulder blades to travel more fully rearward when leaning back. In addition Office Master's Double Comfort Seating (DCS) Technology offers a seating experience that is at once soft and supportive, and truly beyond compare. All DB Series models feature an elegant fabric panel back that is upholstered in a superdurable 1.7 million double rubs fabric. The discovery back with memory foam helps prevent scapular impedance and a healthy posture is achieved across entire line with extensive standard features. A variety of arm and caster configurations are available, as well as high-comfort, molded foam or sigh-producing DCS[™] Technology seats.

- Pneumatic lift
- EZ back height adjustment
- Infinitely locking seat tilt
- Infinitely locking back tilt
- Forward tilting adjustment
- Rocking tension adjustment
- Fabric panel back
- Seat slider
- Memory foam in backrest



• DB74 is designed to accommodate users up to 300 pounds

Note: Arms are normally sold separately.

Manufacturer's Website:

http://officemaster.com/products/index.php?view=product&sid=91

Considerations for Recommending the Office Master Discovery Back (DB) Task Chair

Before selecting an ergonomic chair, read the *General Considerations* for *Recommending an Ergonomic Chair* on page <u>38</u>.

Pro:

- Narrow upper back portion is designed to allow freedom of movement for the shoulders and upper arms and may improve the worker's ability to use the mouse with the arm close to the torso without bumping the backrest with the elbow
- Contour of backrest is designed to promote open chest and shoulder positioning, which may be advantageous for breathing, circulation and spinal health
- Backrest angle adjusts separately from seat angle
- Backrest height is ratchet-adjustable
- Chair can rock and/or lock in reclined position
- Armrests are available (ordered separately see page <u>54</u>)

- The upper backrest is convex, which may not feel supportive to some users
- The lumbar portion is relatively flat, so may not fully support a deeply curved low back
- The backrest is too wide to allow some users' arms to move freely
- The several adjustment paddles and knobs may seem complex to some users



Office Master Maxwell Task Chair

Listed on UCSC Product List as: Office Master Heavy Duty Task Chair, no arms; Product Code MXIU84





Manufacturer's Comments

"MAX"-imum size, "WELL" designed meets Intensive-Use in the MXIU. The entire Maxwell series is constructed from heavy-duty components and wider-body-supporting 24" seat cushions. A remarkable chair that bears users up to a 400 lb. weight capacity, Maxwell is built to endure! And now, with the new slim-look design, users can achieve a less intimidating look without sacrificing any support or comfort.

Manufacturer's Description

- Spacious seat 24 inches wide
- Heavy-duty gas cylinder allows seat height to adjust to any comfort level
- Durable sliding seat accommodates users both tall and short
- Heavy-duty mechanism allows independently adjustable movement
- MXIU84 is designed to accommodate users up to 400 pounds
- Tension control adjusts seat to individual preference
- Rounded-corner back design provides full support and pleasing visual appeal
- E-Z back height (ratchet back) adjustment
- 7 year limited warranty

Note: Arms sold separately, unless otherwise indicated.



Manufacturer's Website:

http://officemaster.com/products/index.php?view=product&sid=167

Considerations for Recommending the Office Master Maxwell Task Chair

Before selecting an ergonomic chair, read the *General Considerations for Recommending an Ergonomic Chair* on page <u>38</u>.

<u>Pro</u>:

- Heavy duty chair is suitable for large users
- Backrest angle adjusts separately from seat angle
- Backrest height is ratchet-adjustable
- Armrests are available (ordered separately see page <u>54</u>)

<u>Con</u>:

• Not suitable for smaller users, especially if they wish to use armrests, which will be too far apart on this wide seat



Office Master WH96 Task Chair

Listed on UCSC Product List as:

Office Master Full Function Heavy Duty Task Chair, no arms; Product Code WH96



Manufacturer's Comments

The WH96 is a unique chair that offers a more adjustable version of the same "cleandesign" control of the Wharton Premier (WH8x) series. What this means is that even on this synchronized knee-tilt model, you have the option of an independent back angle adjustment. Most exciting of all, though, the entire Wharton Collection now features the unbelievable sigh-producing comforts of Office Master's exclusive Double Comfort Seating (DCS) Technology. This DCS Technology was specially developed by Office Master to provide simultaneous softness and support, all in the same amazing seat cushion.

Manufacturer's Description

- Seat is 22 inches wide
- Heavy-duty gas cylinder allows seat height to adjust to any comfort level
- Durable sliding seat accommodates users both tall and short
- Tension control adjusts seat to individual preference
- E-Z back height (ratchet back) adjustment
- WH96 is designed to accommodate users up to 300 pounds

Note: Arms sold separately, unless otherwise indicated.



Manufacturer's Website:

http://officemaster.com/products/index.php?view=product&sid=125

Considerations for Recommending the Office Master WH96 Task Chair

Before selecting an ergonomic chair, read the *General Considerations for Recommending an Ergonomic Chair* on page <u>38</u>.

<u>Pro</u>:

- Has synchronous knee tilt mechanism which some users prefer: seat angle adjusts slightly when backrest angle is changed
- Can be locked in several different angles of recline
- Backrest height is ratchet-adjustable
- Seat depth is adjustable
- Lumbar support is adjustable
- Armrests are available (ordered separately see page 54)

- Backrest and seat contours do not feel comfortable to all users
- The several adjustment paddles and knobs may seem complex to some users



Office Master PTYM Task Chair

Listed on UCSC Product List as: Office Master Big & Tall Full Function Task Chair, no arms; Product Code PTYM





Manufacturer's Comments

The PTYM was specially designed to suit tall users. As a member of the PT Value Line though, it still features many of the same great adjustments found among the other PTs. However, in addition, the PTYM also offers dual-colored 65 mm soft casters, a heavy-duty metal base, extra high 6" cylinder and the supreme comfort of the Office Master's special, Double Comfort Seating Technology seat cushions. With all that it has to offer, it's no wonder that this tall person's chair is named after its inspiration, a certain slightly-taller-than-average Chinese NBA star! (hint: Yao Ming)

Note: Arms sold separately, unless otherwise indicated.

- Seat is 21 inches wide by 20 to 22.5 inches deep
- Heavy-duty gas cylinder allows seat height to adjust from 19 to 25 inches from the floor
- Tension control adjusts seat to individual preference
- Backrest is 19.5" wide by 22" high
- E-Z back height (ratchet back) adjustment
- PT Value Series is designed to accommodate users up to 300 pounds



Manufacturer's Website:

http://officemaster.com/products/index.php?view=product&sid=159

Considerations for Recommending the Office Master PTYM Task Chair

Before selecting an ergonomic chair, read the *General Considerations* for *Recommending an Ergonomic Chair* on page <u>38</u>.

Pro:

- Designed specifically for tall users, with adjustable seat height, angle and depth; backrest height and angle, and heavy duty base
- Backrest can adjust independently of seat
- Chair can rock and/or lock in reclined (or upright) position
- Armrests are available (ordered separately see page 54)

- Front of seat elevates when chair reclines
- Chair is heavier than some other models
- Not suitable for small users
- The several adjustment paddles and knobs may seem complex to some users



Office Master KR-21 Armrests

Listed on UCSC Product List as:

Office Master Height Adjustable Arms for OfficeMaster Chairs; Product Code KR-21



Manufacturer's Comments Contoured height-adjustable T arms

Manufacturer's Description

- Adjustable height range = 2.25"
- 12 year limited warranty on the arm frames
- 2 years limited warranty on the arm pads

Manufacturer's Website:

http://officemaster.com/products/index.php?view=optionsguide&selection_set_id=23

Considerations for Recommending Office Master KR-21 Armrests

Before ordering armrests, please read the *General Considerations for Recommending Chair Armrests* on page <u>39</u>.

Pro:

- Provide a resting place for the arms when not actively using the computer
- Height-adjustable by turning the knobs on the outer sides of the support posts
- Arm caps are durable and smooth
- Compatible with all of the pre-approved Office Master chairs
- Other armrest styles are available consult with vendor



- Not width-adjustable; could crowd the hips of some users
- Not easily removable by the end user
- For some users, may not adjust low enough to allow free arm movement
- Not compatible with non Office Master chairs



SomaComfort™ Petite Users Work Chair

Listed on future UCSC Product List as:

SomaComfort™ Task Chair armless w/ adjustable seat depth; Product Code SC.S.2.Om2.RB.LKt;

SomaComfort™ Task Chair w/ arms & adjustable seat depth; Product Code SC.S.2.Om2.RB.LKt.SS - AA.UD



** See note on following page regarding these images

Manufacturer's Comments

SomaComfort[™] is a high quality chair offering superior anatomically correct support for petite individuals, ideal for users who sit upright for long periods of time. Three basic sizes are available – low-back, mid-back, and tall-back. All are offered with and without arms.

- Seat and back angle adjusts forward, upright, and reclined to suit user and are standard
- Seat swivel is standard
- Seat depth adjusts within a 3" range and is standard
- Seat height adjusts within a 3.75" range with a pneumatic adjustment mechanism
- Seat size: 16"d x 18"w



- Back height adjusts up and down within a 3" range to help ensure healthful back posture
- Backrest size: 15"h x 13"w
- Casters have hard, dual wheels standard
- Soft, dual-wheel casters are available for use on hard floors or chair mats
- Available with or without arms
- Arm rests 3" height and 4" width adjustable with Urethane pad Options: US - Arm caps that can slide forward and back as well as in narrower and out wider; AR - 360° lockable independently rotating arm pad to accommodate individual preferences
- Warranty: 5 years on frame, casters and cylinder. 4 years on mechanism, fabric, cushions and armrests

Manufacturer Website: http://somaergo.com/

Considerations for Recommending the SomaComfort™ Petite Users Work Chair

Before selecting an ergonomic chair, read the *General Considerations for Recommending an Ergonomic Chair* on page <u>38</u>.

Pro:

- Sized to fit petite users, who often have difficulty finding chairs that support them without added cushions
- Highly adjustable
- Seat and backrest angles adjust independently and lock into position
- Armrests adjust up, down, forward, back, in and out
- Soma chairs are available with a variety of component sizes and combinations (see vendor)

- Several adjustment paddles; may seem complex to some users
- Not suitable for larger users
- ** Note: The backrests specified by the model numbers may not appear exactly as those in the images. Confirm details with vendor.



SomaSupport[™] Petite Work Chair

Listed on future UCSC Product List as:

SomaSupport[™] Petite Task Chair armless w/ adjustable seat depth; Product Code SS.S.2.W2.16.Lkt.SS;

SomaSupport[™] Petite Task Chair w/ arms & adjustable seat depth; Product Code SS.S.2.W2.16.Lkt.SS - AA.UD



Manufacturer's Comments

SomaSupport[™] is a high quality chair offering superior anatomically correct support for petite individuals, with its 2-part seat it is ideal for users who sit leaning forward and/or upright for long periods of time. Two backrest options are available – low-back, and mid-back offered with and without arms.

- Seat and back angle adjusts forward, upright, and reclined to suit user and are standard
- Seat swivel is standard
- Seat depth adjusts within a 3" range and is standard
- Seat height adjusts within a 3.75" range with a pneumatic adjustment mechanism
- Seat size: 17"d x 18"w
- Seat is firmer and flatter than those of other Soma chairs
- Back height adjusts up and down within a 3" range to help ensure healthful back posture



- Backrest size: 12"h x 14.5"w
- Casters have hard, dual wheels standard
- Soft, dual-wheel casters are available for use on hard floors or chair mats
- Available with or without arms
- Arm rests 3" height and 4" width adjustable with Urethane pad. Options: US - Arm caps that can slide forward an back as well as in narrower and out wider; AR - 360° lockable independently rotating arm pad to accommodate individual preferences.
- Warranty: 12 years on frame, casters and cylinder. 5 years on mechanism, fabric, cushions and armrests

Manufacturer Website: http://somaergo.com/

Considerations for Recommending the SomaSupport Metite Users Work Chair

Before selecting an ergonomic chair, read the *General Considerations* for *Recommending an Ergonomic Chair* on page <u>38</u>.

<u>Pro</u>:

- Sized to fit petite users, who often have difficulty finding chairs that support them without added cushions
- Highly adjustable
- Seat and backrest angles adjust independently and lock into position
- Soma chairs are available with a variety of component sizes and combinations (see vendor)

- Several adjustment paddles; may seem complex to some users
- Not suitable for larger users



SomaFit[™] Synchro Standard Size Work Chair

Listed on future UCSC Product List as:

SomaFit[™] Standard Task Chair armless w/ adjustable seat depth; Product Code FT.E.5.MJx2.RB.LS;

SomaFit[™] Standard Task Chair w/ arms and adjustable seat depth; Product Code FT.E.5.MJx2.RB.LS - AA.UD





Manufacturer's Comments

A high quality task chair offering superior anatomically correct support and easy to use adjustments, SomaFit[™] Synchro is ideal for users who sit upright or reclined and change posture/position frequently. Once you set the Synchro tilt mechanism it reclines automatically. Three backrest options are available – mid-back MJx (shown), Mid TCs (shown in inset) and TJt (32" tall backrest). All are available with or without arms.

- Synchro and independent back angle adjusts forward, upright, and reclined to suit users needs
- Lockable seat recline with low rise front so your feet stay on the ground as you recline
- Seat swivel is standard
- Seat depth adjusts within a 3" range and is standard
- Seat height adjusts within a 3.75" or 4.75" range with a pneumatic adjustment mechanism



- Back height adjusts up and down within a 3" range to help ensure healthful back posture
- Casters have hard, dual wheels standard
- Soft, dual-wheel casters are available for use on hard floors or chair mats
- Available with or without arms
- Arm rests 3" height and 4" width adjustable with Urethane pad. Options: US - Arm caps that can slide forward an back as well as in narrower and out wider; AR - 360° lockable independently rotating arm pad to accommodate individual preferences
- Warranty: 12 years on frame, casters and cylinder. 5 years on mechanism, fabric, cushions and armrests

Manufacturer Website: http://somaergo.com/

Considerations for Recommending the SomaFit M Synchro Standard Size Work Chair

Before selecting an ergonomic chair, read the *General Considerations for Recommending an Ergonomic Chair* on page <u>38</u>.

Pro:

- Sized to fit an average range of user sizes
- Highly adjustable
- Seat and backrest angles adjust independently and lock into position
- Front of seat does not elevate when chair reclines
- Armrests adjust up, down, forward, back, in and out
- Soma chairs are available with a variety of component sizes and combinations (see vendor)

<u>Con</u>:

• Several adjustment paddles; may seem complex to some users



SomaComfort™ Xtra-Sturdy Big and Tall Users Work Chair

Listed on future UCSC Product List as:

SomaComfort™ Xtra-Sturdy Task Chair w/o arms, w/ adjustable seat depth; Product Code SC.F.7.TCs2.J4.LSH;

SomaComfort™ Xtra-Sturdy Task Chair w/ arms & adjustable seat depth; Product Code SC.F.7.TCs2.J4.LSH.SS - AA.UD

Manufacturer's Comments

SomaComfort[™] Xtra-Sturdy is a Heavy Duty high quality chair specially designed and built for people from 250 – 500 lbs. offering superior anatomically correct support for big and tall individuals. Three basic sizes are available – low-back, midback, and tall-back. All are offered with or without arms.

- Seat and back angle adjusts forward, upright, and reclined to suit user and are standard
- Seat swivel is standard
- Seat depth adjusts within a 3" range and is standard
- Seat height adjusts within a 3.75" range with a pneumatic adjustment mechanism
- Seat size: 21.5"d x 25"w
- Back height adjusts up and down within a 4" range to help ensure healthful back posture
- Backrest size: 26"h x 14"w
- Casters have 3" diameter hard, dual wheels standard
- Soft, 3" diameter dual-wheel casters are available for use on hard floors or chair mats
- Available with or without arms
- Arm rests 3" height and 4" width adjustable with Urethane pad. Options: US - Arm caps that can slide forward an back as well as in narrower and out wider; AR - 360° lockable independently rotating arm pad to accommodate individual preferences
- Warranty: 5 years on frame, casters and cylinder. 4 years on mechanism, fabric, cushions and armrests





Manufacturer Website: http://somaergo.com/

<u>Considerations for Recommending the SomaComfort™ Xtra-Sturdy Big and Tall</u> <u>Users Work Chair</u>

Before selecting an ergonomic chair, read the *General Considerations* for *Recommending an Ergonomic Chair* on page <u>38</u>.

Pro:

- Sized to fit big and tall users
- Highly adjustable
- Seat and backrest angles adjust independently and lock into position
- Has center pivoting "free float" feature
- Soma chairs are available with a variety of component sizes and combinations (see vendor for details)

- Several adjustment paddles; may seem complex to some users
- Not suitable for small users



SomaHybrid™ Lab Chair

Listed on future UCSC Product List as:

SomaHybrid[™] Lab Chair armless w/ adjustable seat depth; Product Code Hy.S.H.MBn2.16.LM.SS;

SomaHybrid™ Lab Chair w/ arms & adjustable seat depth; Product Code Hy.S.H.MBn2.16.LM.SS - AA.UD





Manufacturer's Comments

SomaHybrid[™] is a high quality lab chair offering superior anatomically correct support for working in labs. Ideal for users who sit forward and/or upright for long periods of time, users can also sit forwards or reverse using the backrest as a chest rest when working in forward tasks for extended periods of time. These are available in 3 different heights: Standard (for desks to 30" high), Mid (for desks to 36" high) and Drafting height for working at tables up to 44" high. All are available with or without armrests and/or foot rings.

- Seat and back angle adjusts forward, upright, and reclined to suit user and are standard
- Seat swivel is standard
- Seat depth adjusts within a 3" range and is standard



- Seat height adjusts within a 5", 8", or 10" range with a pneumatic adjustment mechanism
- Back height adjusts up and down within a 5" range to help ensure healthful back posture
- Casters have 3" diameter hard, dual wheels standard
- Glides, and soft, or soft braking dual-wheel casters are available for use on hard floors or chair mats
- Available with or without arms and 20" diameter foot rings
- Arm rests 3" height and 4" width adjustable with Urethane pad. Options: US - Arm caps that can slide forward and back as well as in narrower and out wider; AR - 360° lockable independently rotating arm pad to accommodate individual preferences
- Warranty: 10 years on frame, casters and cylinder. 4 years on mechanism, fabric, cushions and armrests

Manufacturer Website: http://somaergo.com/

Considerations for Recommending the SomaHybrid M Lab Chair

Before selecting an ergonomic chair, read the *General Considerations* for *Recommending an Ergonomic Chair* on page <u>38</u>.

<u>Pro</u>:

- Versatile design with choice of forward and reverse sitting positioning; reverse sitting allows for leaning forward against the backrest
- Saddle seat design allows for wide-based sitting position
- Promotes open hip angle, which can assist in sitting upright with natural lumbar curve
- May be useful for workers who need to move, lean forward and reach at the workstation
- May allow for light weight-bearing through the legs
- Soma chairs are available with a variety of component sizes and combinations (see vendor)

<u>Con</u>:

- User must use caution when raising one leg over the chair for reverse sitting
- Some users find the saddle seat design uncomfortable; may require adjustment period
- Not recommended for long periods of computer use



Steelcase Amia 482 Series Chair

Listed on UCSC Product list as: Steelcase Amia chair w/arms; Product Code 4821410 Steelcase Amia chair without arms; Product Code 4821410



Manufacturer's Comments

Amia is a hardworking task chair designed to handle long hours of serious sitting. Tucked away inside its backrest is the Amia chair's patent-pending LiveLumbar – a series of flexors that contour to fit your spine, for continuous lower back support as you move in your chair. As you sit in the chair, an adjustable LiveLumbar zone flexes with your every move, for consistent ergonomic support for your lower back. With additional comfort features like 4-way adjustable arms, adjustable seat depth and a flexible front seat edge, provides comfort 24/7.

- LiveLumbar system offers a dialed in spring force in the lumbar region that actively supports the lower back
- Arm height can adjust independently within a 4" range to help relieve upper back and shoulder fatigue
- Seat depth adjusts within a 3" range. Seat depth is standard on all models
- Five-arm base is standard
- Casters have hard, dual wheels that roll smoothly on carpets. They are 21/2" for increased mobility. Soft, dual-wheel casters are available for use on hard floors or chair mats



- Arm depth can be adjusted approximately 3", enabling individuals to get closer to their work
- Arm width can adjust 41/2" overall to provide forearm support
- Arm caps can pivot 30° in and out to accommodate individual user preferences
- Passive seat edge angle allows the front edge of the seat to flex 11/2", relieving pressure behind the thighs
- Back tension accommodates a broader range of users by allowing user to change the rate of increase, or decrease, in force as the user reclines
- Seat height adjusts within a 5" range with a pneumatic adjustment mechanism
- Upright back lock allows the user to lock the back in a full upright position, or release it for full-tilt motion
- Handles loads up to 300 lbs

Manufacturer's Website:

http://www.steelcase.com/en/products/Category/Seating/task/Amia/Pages/overview.asp x

Considerations for Recommending the Steelcase Amia 482 Series Chair

Before selecting an ergonomic chair, read the *General Considerations* for *Recommending an Ergonomic Chair* on page <u>38</u>.

<u>Pro</u>:

- Suitable for moderately small to moderately large users, with adjustable seat and armrest height; seat depth; armrest width and depth; backrest stop; and other features
- Armrests can pivot and move in and out, forward and back
- "Environmentally Friendly" manufacturing and materials; up to 97% recyclable, according to the manufacturer

<u>Con</u>:

- Armrest caps could move if user pushes hard on them to stand up or change position
- Seat angle is not adjustable
- Backrest cannot be locked in a reclined angle


Steelcase Criterion 453 Series Work Chair

Listed on UCSC Product list as: Steelcase Criterion Operational Chair w/ arms; Product Code 4535330DP; Steelcase Criterion Operational Chair armless w/ adjustable seat pan; Product Code 4535300D



Manufacturer Comments

Criterion is a high-performance chair, ideal for users who sit for long periods of time. Criterion's soft curves and pleasing contours provide all-day comfort. The seven independent adjustments offer support through the full range of dynamic seating postures.

- Arm height adjusts independently within a 4" range to help relieve upper back and shoulder fatigue
- Arm width adjusts within a 4" range for each arm to provide forearm support in neutral position
- Arm caps can pivot independently 14° in and 21° out to accommodate individual user preferences
- Back height adjusts up and down within a 2" range to help ensure healthful back posture
- Variable back stop is standard
- Seat depth adjusts within a 3" range and is available as an option
- Seat height adjusts within a 5" range with a pneumatic adjustment mechanism



- Seat angle adjusts forward, upright, and reclined to suit user. Seat angle is standard
- Casters have hard, dual wheels standard. Soft, dual-wheel casters are available for use on hard floors or chair mats
- Available with or without arms

Manufacturer Website:

http://www.steelcase.com/en/products/category/seating/task/criterion/pages/overview.as px

Considerations for Recommending the Steelcase Criterion 453 Series Work Chair

Before selecting an ergonomic chair, read the *General Considerations* for *Recommending an Ergonomic Chair* on page <u>38</u>.

Pro:

- Most popular chair
- Suitable for small to moderately large users, with adjustable seat, backrest and armrest height; seat depth and angle; armrest width; back stop and tension
- Telescoping armrests can adjust far inward for users with slim build
- Excellent value

Con:

- Armrests may not stay still if user pushes on them to stand up or change position (but can be ordered with fixed arm caps)
- Backrest cannot be locked in reclined angle
- Back stop lever initially difficult to find on undersurface of seat
- Armrests, at lowest setting, may be too high for some users



Steelcase Criterion Plus 453 Series Work Chair

Listed on UCSC Product list as:

Steelcase Criterion Plus standard seat depth 18.25" w/arms; Product Code 4539331BW Steelcase Criterion Plus standard seat depth 18.25" w/o arms; Product Code 4539301B Steelcase Criterion Plus w/special 19.5" seat depth with arms; Product Code 4539331BW special

Steelcase Criterion Plus w/special 19.5" seat depth without arms; Product Code 4539301B special



Manufacturer Comments

Criterion is engineered for those who need a larger chair with the same adjustability and comfort as Criterion. Criterion Plus has soft curves and pleasing contours for all-day comfort. Criterion Plus features a 20% larger seat and back, added back support, higher density foam, reinforced frame, and high-pressure pneumatics to meet the needs of larger users, up to 500 pounds.

Features of the Criterion Plus are the same as the Criterion except that the Arm Caps do not pivot and the seat depth adjusts manually.

- Arm height adjusts independently within a 4" range to help relieve upper back and shoulder fatigue
- Arm width adjusts within a 4" range for each arm to provide forearm support in neutral position
- Back height adjusts up and down within a 2" range to help ensure healthful back posture



- Variable back stop is standard
- Seat depth adjusts manually
- Seat height adjusts within a 5" range with a pneumatic adjustment mechanism
- Seat angle adjusts forward, upright, and reclined to suit user
- Casters have hard, dual wheels standard. Soft, dual-wheel casters are available for use on hard floors or chair mats
- Available with or without arms

Manufacturer Website:

http://www.steelcase.com/en/products/category/seating/task/criterionplus/pages/overview.aspx

Considerations for Recommending the Steelcase Criterion Plus 453 Series Work Chair

Before selecting an ergonomic chair, read the *General Considerations* for *Recommending an Ergonomic Chair* on page <u>38</u>.

<u>Pro</u>:

- Large and sturdy chair for users up to 500 pounds
- Highly adjustable, including seat, backrest and armrest height; seat depth (manually) and angle; back stop and tension
- Models with special 19.5" seat depth provide 1.5" extended thigh support for taller users and those whose body contours position them forward in the seat

- Backrest cannot be locked in reclined angle
- Back stop lever initially difficult to find on undersurface of seat
- Seat depth can only be adjusted manually
- Not suitable for small users



Steelcase Leap 462 Series Chair

Listed on UCSC Product list as:

Steelcase Leap Chair with adj. seat pan w/arms; Product Code 46216179 Steelcase Leap Chair with adj. seat pan without arms; Product Code 46216179





Manufacturer Comments

The Leap chair was designed with your well-being in mind. It was also designed with the planet's well-being in mind. Leap is a high performance chair for customers who place the highest value on ergonomics, health, and productivity.

- Arm height can adjust independently within a 4" range to help relieve upper back and shoulder fatigue
- Arm depth can be adjusted approximately 3", enabling individuals to get closer to their work
- Arm width can adjust 41/2" overall to provide forearm support
- Arm caps can pivot 30° in and out to accommodate individual user preferences
- Lumbar height of 5" of additional lower back support is standard on all chairs, but may be omitted
- Lower back firmness changes the amount of firmness user feels in lower back. Requires only two complete turns
- Upper back force requires only five complete turns and accommodates a broader range of users by allowing user to change the rate of increase in force as the user reclines
- Variable back stop with five positions is standard



- Seat height adjusts within a 5" range with a pneumatic adjustment mechanism. A 7" range is available as an option. Stools have an 8" range
- Seat depth adjusts within a 3" range. Seat depth is standard on all models
- Stools are standard with 2" hard casters. Soft casters are available as an option for use on hard floors or chair mats

Manufacturer Website:

http://www.steelcase.com/en/products/category/seating/task/leap/pages/overview.aspx Environmental Information:

http://www.steelcase.com/en/products/category/seating/task/leap/pages/environmental. aspx

Considerations for Recommending the Steelcase Leap 462 Series Chair

Before selecting an ergonomic chair, read the *General Considerations* for *Recommending an Ergonomic Chair* on page <u>38</u>.

Pro:

- Suitable for small to moderately large users, with adjustable seat and armrest height; seat depth; armrest width and depth; back stops and tension; lumbar height; and other features (should be ordered with lumbar height option)
- Armrests can pivot, move in and out, forward and back
- Adjustment diagrams are easily accessed beneath the armrest caps
- "Environmentally Friendly" manufacturing and materials; up to 98% recyclable, according to the manufacturer

- Armrest caps could move if user pushes hard on them to stand up or change position
- Backrest cannot be locked in reclined angle
- Some users find the seat cushion too thin
- Some users have found that the wrapping backrest obstructs posterior elbow movement
- Chair adjustment is unusual and somewhat complex



Steelcase Think 465 Series Work Chair

Listed on UCSC Product list as:

Steelcase Think Chair with 3d knit and lumbar with adj. arms; Product Code 46543100 Steelcase Think Chair with 3d knit and lumbar without arms; Product Code 46543000 Steelcase Think Chair with upholstered back with adj. arms; Product Code 46540100 Steelcase Think Chair with upholstered back without adj. arms; Product Code 46540000





Manufacturer Comments

The Think chair is intelligent enough to understand how you sit and to adjust itself intuitively and is designed to minimize its lifelong impact on the environment. It is the first product to ever receive Cradle to Cradle[™] Product Certification from McDonough Braungart Design Chemistry's (MBDC). The Think chair is also the first-ever certified Level[™] 3 product, the highest BIFMA e3 standard.

- Arm width adjust 41/2" overall to support forearms in neutral position
- Arm height can adjust independently within a 4" range to help relieve upper back and shoulder fatigue
- Arm depth can retract 3" to allow user to get closer to the work surface
- Arm caps can pivot independently 27° in and 27° out to accommodate individual user preferences, and provide 4" width adjustment
- Your Preference back control provides four settings for the user's personal preference and work style
- Seat height adjusts within a 5" range with a pneumatic adjustment mechanism. A 4" range is available as an option
- Seat edge angle naturally tilts and allows the front edge of the seat to flex 1½" to relieve pressure under the user's thighs



- Seat depth adjusts within a 2" range to accommodate users of varying leg lengths
- Five-arm base is available in plastic or polished aluminum
- Casters have hard, dual wheels that roll smoothly on carpets. They are 2½" for increased mobility. Soft, dual-wheel casters are available as an option for use on hard floors or chair mats
- Optional headrest available

Manufacturer Website:

http://www.steelcase.com/en/products/category/seating/task/think/Pages/overview.aspx Environmental Information:

http://www.steelcase.com/en/products/category/seating/task/think/pages/environmental. aspx

Considerations for Recommending the Steelcase Think 465 Series Work Chair

Before selecting an ergonomic chair, read the *General Considerations* for *Recommending an Ergonomic Chair* on page <u>38</u>.

Pro:

- Suitable for small to moderately large users, with adjustable seat and armrest height; seat depth; armrest width and depth; back stops; and other features (should be ordered with lumbar height option)
- Armrests can pivot, move in and out, forward and back
- Backrest recline is weight-activated
- Light weight makes it easy to move the chair
- Available with "3D Knit" backrest, which some users may prefer for its mobility and breathability
- "Environmentally Friendly" manufacturing and materials; up to 98% recyclable, according to the manufacturer

- Armrest caps could move if user pushes hard on them to stand up or change position
- Backrest cannot be locked in a reclined angle
- Backrest adjustment is unusual and may require a learning period
- Some users have felt that the mesh back was not supportive
- Lumbar height adjustment on chair with mesh back may be difficult due to impedance by horizontal supports



Pointing Devices / Mice / Trackballs

General Considerations for Recommending a Pointing Device

- A pointing device recommendation is a complex undertaking and may be too difficult to make without advanced ergonomics training and experience, particularly if a worker needs technique training and/or has a history of an injury to the upper extremities or current RSI symptoms. When in doubt, contact EH&S and/or Risk Services for assistance.
- When selecting a pointing device deciding factors may include one or more the following:
 - The ways in which the pointing device is commonly used (based on the worker's computer tasks and pointing techniques)
 - The worker's ability to change habits to use the new pointing device effectively and safely
 - Handedness (left, right or ambidextrous)
 - Physical demands and location(s) of other work activities
 - The worker's physical comfort and preferences.
- When considering which pointing device to recommend, answer the following questions:
 - Does a specific pointing device enable the worker to:
 - Perform recurrent input tasks more easily and efficiently? (e.g.: pointing, clicking, dragging, double-clicking, highlighting, scrolling, and right-clicking)
 - Demonstrate better posture and movement? (e.g.: relaxed shoulder, minimal reaching, neutral wrist position, relaxed fingers)
 - Rest easily in neutral postures when not actively mousing?
 - Alternate efficiently between keyboard and pointing device?
 - Does the worker have the time and inclination to learn to use the new device safely and effectively?
 - Will the worker need to use more than one pointing device and/or more than one pointing device location due to physical or other needs?
 - Will space considerations either favor or limit the use of a particular device?
 - Which specific pointing devices does the worker favor?



AirO2bic™ Mouse / Quill Mouse

Listed on UCSC Product list as:

Airobic Quill Mouse, Right Black; Product Code S90090-0020 Airobic Quill Mouse, Right White; Product Code S90090-0030 Airobic Quill Mouse, Left Black; Product Code S90270-0020 Airobic Quill Mouse, Left White; Product Code S90070-0030



Manufacturer's Comments

The only Ergonomically Functional Neutral mouse that untwists the wrist and does not need to be gripped. The AirO2Bic[™] has you place your hand in it, not on or around, it so you do not have to use the smaller muscle that can become injured. Fatigue affects all muscles when they are under anything but a resting tension. It is a 3-Button, scroll wheel mouse, USB "plug-n-play" so no software is usually required for basic operation. Some brands of PC may require an extra module for button assignment which is available from the "User" section of the company's support pages. A PS/2 adaptor is provided but, when possible, use of the USB port is advised so that the high speed optical device may operates more efficiently. PC and Mac compatible, this mouse removes Static Posture, a working position that keeps muscles tensed.

- Optical Tracking System for low maintenance high accuracy mousing
- 3 Mouse Button Design
- Scroll Wheel for ease of Internet operation
- Lightweight easy clean body molding
- Detailed Manual with Posture Recommendations
- CD supplied with demo 'Clickless Software' and other informative material
- Replacement feet available to keep glide performance optimal
- USB Connectivity USB is the recommended method of connection as it is 'Plug n Play' (does not require a driver or software to be loaded onto your computer)
- PS/2 adaptor available please order Part No 0180-1111
- Windows NT 4.0 Server users please add Part No 0180-1122 (no charge)



• Available as Right or Left handed in Black or White color

Manufacturer Website: http://www.aerobicmouse.com/

Considerations for Recommending the AirO2bic[™] Mouse / Quill Mouse

Before selecting any pointing device, read the General Considerations for Recommending a Pointing Device on page $\frac{76}{2}$.

<u>Pro</u>:

- User may be able to relax hand when navigating the mouse
- Promotes a more neutral forearm position than does a standard mouse
- May be a good fit for employees who have difficulty with the standard (palm down) positioning due to limited range of motion or discomfort in the forearms or elbows

- Requires more space to use than a standard mouse due to its bigger size
- Hard plastic edges can compress sensitive tissues on forearm, wrist, or fingers during use
- Awkward wrist angles may occur if the incline angle of the mouse does not match the user's neutral wrist angle
- Fingers might be held upward to reach the buttons if the button locations do not match the user's neutral finger placements
- Repetitive finger motion and awkward posture may occur when using the scroll wheel
- One-sided design prevents this device from being used with the opposite hand



Cirque Easy Cat® Touchpad

Listed on UCSC Product list as: Cirque Easy Cat Touchpad PS/2 Unit; Product Code S9GP160PB Cirque Easy Cat Touchpad USB Unit; Product Code S9GP160UB





Manufacturer's Comments

The Cirque Easy Cat® AG touchpad makes it easier and more comfortable than ever to control your computer. To perform basic mouse functions, simply glide your finger over the smooth surface to point, then tap on the pad or press on the buttons to click or activate vertical scroll by simply gliding a finger along the right edge of the touchpad. Use an easy cat, instead of a traditional mouse and your wrists will thank you. Easy Cat's compact size makes it a perfect traveling companion for your laptop.

Manufacturer's Description

- Multi-finger Advanced Gestures available: scroll, zoom, rotate and more
- Right tap mimics a mouse right click
- Scroll moves vertically
- GlideExtend® virtually eliminates the edge of the pad when dragging
- Small and portable
- Withstands spills and abuse
- Thin and comfortable design
- Easy-to-find textured "right" click area
- Easy Serial, PS/2 or USB connectivity

Manufacturer Website:

http://www.cirque.com/desktoptouchpad/touchpad-mouse-overview.aspx

Considerations for Recommending the Cirque Easy Cat® AG touchpad



Before selecting any pointing device, read the *General Considerations for Recommending a Pointing Device* on page <u>76</u>.

Pro:

- Similar to using a trackball, your shoulder can stay in neutral posture if the touchpad is well-positioned
- The smaller-sized touch pad can be positioned to protect the shoulder more so than larger touch pads or standard mice
- The device is plug-and-play so no software is needed (unless the device is to be used on a Mac then a software download is required)
- It is stable, small and light. This affords portability and allows it to be placed on an angled plane or on your lap to match a neutral forearm and/or wrist position
- The touch pad can be used with either hand
- The Cirque Easy Cat's GlideExtend® feature allows you to drag farther than the margin of the pad's surface. (There is a textured margin on all four sides of the touch pad. If you are dragging something and you get to this textured edge zone, GlideExtend® will hold a drag for three seconds while you reposition your finger to complete the operation.)
- The Cirque Easy Cat pointing device is more durable than some pointing devices
- The textured right-click area is easy to locate by touch

Con:

- The device promotes highly repetitive use of whichever finger simulates cursor and clicking movements
- It is common to find multiple fingers and the thumb elevated, motionless and mildly tensed while one finger drives the device
- The wrist often extends and may be compressed in order to stabilize the hand or rest the arm and shoulder
- For PC systems, the touchpad does not offer advanced features of the more expensive touch pads
- The buttons are stiff so and require more force to press
- The Cirque Easy Cat is less precise than many other pointing devices for activities such as graphics editing. Thus, a touchpad device is not ideal for prolonged intensive precision work
- The software driver for the Cirque Easy Cat may conflict with a built-in pointing device driver on a laptop computer. If you are considering using this device with a laptop, especially an Apple operating system, some web-based advice can be found on the internet, such as installing a USB overdrive



Contour Design RollerMouse Free2

Listed on UCSC Product list as: Contour RollerMouse Free; Product Code S9RMFREE2BLK





Manufacturer's Comments

RollerMouse Free2 is our latest innovation. Modern, intuitive and slim, its design is inspired by users and our ergonomic expertise. It's an ultra-low ergonomic mouse alternative that is placed right in front of you. This central and flat position allows you to work safer, faster and more comfortably. RollerMouse Free2 offers complete freedom, functionality and flexibility.

- Use the keyboard risers to customize the height and angle of your keyboard to find the most comfortable typing position. The ultra-low and slim RollerMouse Free2 keeps your hands and wrists flat on a desk or table – the safest working position for your body
- The fully open rollerbar opening allows you to place several fingers, from one or both hands, parallel to each other. This improves control and precision while reducing and distributing the workload between the fingers
- RollerMouse Free2 is the lowest RollerMouse yet. Its 19.5 mm height makes it even easier to rest your hands and wrists flat on a desk or table. Working with flat wrists is the optimal ergonomic position for your body
- The integrated leatherette wrist rest is ergonomically designed to keep your hands, wrists and forearms flat. The wrist padding is slightly higher than the rollerbar to avoid unwanted clicks
- Choose between five cursor speeds ranging from 800 dpi to 1600 dpi for maximum precision. The speed increases by 200 dpi with a push of a button. Five lights above the triangular button indicate the current cursor speed
- RollerMouse Free2 controls are located near the keyboard. This eliminates awkward movements and strain caused by gripping the mouse



- The ultra-low and slim design of RollerMouse Free2 fits most keyboards without the need for further adjustment. The height and angle of the keyboard can be adjusted by simply inserting the keyboard risers, two modular mini-platforms, to find the most comfortable working position. An optical sensor detects the cursor movement to ensure consistent and reliable tracking.
- Adjust the amount of pressure required to perform a mouse click. Use the clickforce tension slider underneath RollerMouse Free2 to choose from soft to firm settings.
- The keyboard risers are covered with rubber to keep the RollerMouse Free2 in a firm and steady position. The better fixed RollerMouse Free2 is on the table or desk, the easier it is to find the right buttons and maintain your preferred working position.
- The rubber-coated rollerbar gives you solid and precise cursor control with very little need for force. This allows the cursor to be moved with a light touch, which reduces tension on the fingers, hands and arms.
- If the cursor cannot move further, simply force the bar slightly to the right or left until a gentle click is heard. This activates the end detection and the cursor can move anywhere on the screen.
- The rollerbar's low-friction Teflon-coated bearings give consistent, smooth and light cursor movement. The bearings are protected from touch and dirt, making the rollerbar maintenance-free.

Note: Does not include keyboard

Manufacturer Website: http://ergo.contourdesign.com/products/rollermouse/

Considerations for Recommending the Contour Design RollerMouse Free2

Before selecting any pointing device, read the *General Considerations for Recommending a Pointing Device* on page <u>76</u>.

Pro:

- Allows mouse use without the need to grip or reach outward
- The space directly adjacent to the keyboard can remain available as a writing space since the device is not placed to the side of the keyboard
- Fingers and hands can be used alternatively on buttons and Rollerbar to reduce repetitive motion
- The scroll wheel can be moved with shoulder motion instead of the repetitive finger motion encouraged by standard mice
- Copy, paste and double-click buttons are conveniently placed to increase efficiency



Con:

- Possible injury risk through repetitive, awkward and forceful use of thumbs (users must be cautioned and instructed to avoid using the thumbs on the Rollerbar)
- Since the worker reaches past the RollerMouse Free2 to the keyboard, consistent neutral shoulder posture may be difficult to achieve during keying
- Some workers may find sustained inward angle of the forearms while using the Roller Mouse Free intolerable
- Excessive force can occur if the Rollerbar is pressed for clicking or if it is pushed far to the side(s) for pointing
- Some workers tend to lean on the wrist rest portion with awkward wrist posture
- The straight design of the RollerMouse Free2 device might not align properly with an alternatively shaped keyboard



Contour Perfit Mouse Optical by Contour Designs

Listed on UCSC Product list as:

Contour Perfit Mouse - {*color*}, {*size*}, {*scroll option*}; 28 model numbers vary depending on desired features



Manufacturer's Comments

The Perfit Mouse Optical maintains the ergonomic integrity of the Perfit Mouse timetested form while adding new productivity enhancing features. Our unique posture for the palm, thumb, and fingers is not only great for rapid target acquisition, but also allows maximum muscle and tendon variation throughout point and click operations. When the hand is placed in this balanced posture, local hand muscles come into play. This minimizes the need for flexor muscles that are connected to the fingers through the carpal tunnel. Reduction of carpal tunnel activity is the key to preventing carpal tunnel syndrome.

The new optical versions add the latest technology to the unique design of the original Perfit Mouse. A high precision optical sensor provides excellent cursor control. The Perfit Mouse Optical places a scroll wheel above the thumb support, rather than on the top of the mouse to reduce the strain on the index finger, which is already heavily used for the primary mouse click. At the bottom of the integrated Thumb Support is the innovative two-position side rocker switch which gives quick and effortless access to two additional programmable buttons.

- 800dpi precision optical tracking
- Available in multiple sizes for both left and right hands Small, Medium, Large, and Extra-Large for the right hand; Small, Medium, and Large for the left hand



- Sculpted elevated buttons enable the hand to remain open with the fingers extended in a ready position for quick button activation
- Thumb support with integrated scroll wheel & two position rocker switch scroll wheel provides scrolling and the textured, rubber coated light touch two position rocker switch provides access to additional repetitive commands
- Elevated wrist support reduces pressure on the wrist, maintains a straighter wrist alignment, and minimizes lateral deviation
- Available for multiple platforms supports both PS2 and USB connections
- Programmable software

Manufacturer's Website:

http://ergo.contourdesign.com/products/product-detail.aspx?id=36

Considerations for Recommending the Perfit Mouse Optical by Contour Designs

Before selecting any pointing device, read the *General Considerations* for *Recommending a Pointing Device* on page <u>76</u>.

<u>Pro</u>:

- Many sizes are available for small to extra large, right or left hands
- Fits well for workers who have thick wrists since the mouse buttons sit higher than those of most mice
- Scroll wheel is optional

- The sharp angle of the top front ledge of the mouse could compress the delicate tissues of the palm
- If a scroll wheel is present, it is positioned on the side of the mouse for thumb use. Frequent scroll wheel use could lead to thumb overuse
- The tall height and flat forward surface of this mouse may promote awkward wrist posture and unnaturally flattened finger positioning



Evoluent[™] VerticalMouse[™] 3 Wireless

Listed on UCSC Product list as:

Evoluent Vertical Mouse (Handshake) for right hand Wireless; Product Code S9VM3WR





Manufacturer's Comments

The Evoluent[™] VerticalMouse[™] 3 Wireless is the advanced third generation of the revolutionary mouse from the inventor of the handshake grip. Many users said the VerticalMouse relieved their wrist and arm pain.

The Evoluent VerticalMouse 2 was evaluated in 2007 by a team at the health services clinic in UC Berkeley, including medical doctors, physical therapists, ergonomists, and administrators. It was found to be comfortable, easily adapted-to, and promote a neutral wrist and forearm posture.

- The patented shape supports your hand in a fully upright handshake position that eliminates forearm twisting. An ordinary horizontal mouse requires your forearm to twist away from its natural position. The grip is the same as on an ordinary mouse, just turned sideways into a handshake position. Many users said they got used to it very quickly
- The VerticalMouse does not move sideways when clicking with normal force because the thumb naturally opposes the fingers
- Pointer control is as accurate as any other good mouse when the pointer speed settings are properly adjusted
- The compact USB receiver is slim enough to avoid blocking adjacent ports
- The device has a three-month estimate battery life under typical use with nonchargeable AA batteries
- The sensor never sleeps so pointer response is always instantaneous
- A small lip on the bottom edge prevents the little finger from rubbing the desk
- All five buttons are easily operable without contorting your fingers
- The button force is light for easy clicking, but still firm enough to avoid accidental actuation



- The new shape fits larger hands as well as smaller hands better
- A high quality optical sensor tracks better than many wireless laser mice so you don't waste time chasing the pointer
- The 1200 dpi true hardware resolution moves the pointer more quickly to reduce hand movements
- Five buttons are programmable with different functions in different applications (for example, a button can be Double Click in one application and Ctrl in another application). When the driver is not installed, the default functions in Windows are:
 - Top button left click
 - Wheel button forward
 - Middle button middle click (e.g., for pan and rotate in CAD programs)
 - Bottom button right click
 - Thumb button back
- Special functions include, speed toggle, auto click, click lock and break reminder
- The VerticalMouse 3 can be repositioned without moving the pointer by tilting it slightly to disable tracking and sliding it without moving the pointer

Manufacturer Website: http://www.evoluent.com/vm3w.html

Considerations for Recommending the Evoluent[™] VerticalMouse[™] 3 Wireless

Before selecting any pointing device, read the *General Considerations for Recommending a Pointing Device* on page <u>76</u>.

<u>Pro</u>:

- Promotes a more neutral forearm position than does a standard mouse
- May be a good fit for employees who have difficulty with the standard (palm down) positioning due to limited range of motion or discomfort in the forearms or elbows
- The buttons are easy to press and quiet

Con:

- Can lead to the following signs that may contraindicate use of this product:
 - Moving the mouse primarily with hand or wrist motion
 - Tensing fingers, such as squeezing the mouse or holding fingers up
 - Stretching or widening the hand beyond a natural relaxed posture on the mouse
- Height of mousing surface is more critical than for a standard mouse to avoid awkward angling of wrist
- Fingers might be held awkwardly to reach the buttons if the button locations do not match the user's neutral finger placements
- Repetitive finger motion and awkward posture may occur when using the scroll wheel



- The cordless mouse is heavier than corded mice so it will require more force to move the mouse than the corded version
- Picking up the mouse during use increases the risk for injury
- One-sided design prevents this device from being used with the opposite hand
- Not available in left-handed design



Evoluent VerticalMouse 4 Left / Right

Listed on UCSC Product list as:

Evoluent Vertical Mouse 4 (Handshake) for left hand Wired; Product Code S9VM4L Evoluent Vertical Mouse 4 (Handshake) for right hand Wired; Product Code S9VM4R





Manufacturer's Comments

The shape of the Evoluent[™] VerticalMouse[™] 4 supports your hand in an upright neutral posture that generally avoids forearm twisting. Many users, including medical doctors, ergonomists and physical therapists, said the Evoluent VerticalMouse provides superior comfort and even relieved their wrist pain.

- The shape is thoughtfully sculpted for uncompromised comfort and easy-to-reach programmable buttons. No finger contortions are needed to operate the buttons
- The thumb rest has been reshaped to provide even more comfort over earlier versions
- Pointer speed controls on the side allow convenient adjustment without even releasing your grip from the mouse
- Top mounted LEDs show through the chrome thumb rest to indicate selected pointer speed including extra low (XL), low (LO), MD (medium), to high (HI)
- A new bottom thumb button provides greatly extended functionality when used with the included driver
- An extra wide lip along the bottom edge prevents the last finger from rubbing the desk
- The logo is pure eye candy. The illumination turns off when the system is in sleep mode to conserve notebook battery power
- Evoluent Mouse Manager for Windows provides extensive but easy to use functionality for 6 buttons through a simple and intuitive interface
- Includes driver for Windows XP, Vista, and Win 7 in 32/64 bit for programming <u>all 6</u> <u>buttons</u>. The driver is not required



• For Mac, basic functionality in OS X or newer can function without a driver: A Mac driver should be available by mid 2011

Manufacturer's Website: http://www.evoluent.com/index.html

Considerations for Recommending the Evoluent VerticalMouse 4 – Right/Left Hand

Before selecting any pointing device, read the General Considerations for Recommending a Pointing Device on page $\frac{76}{2}$.

<u>Pro</u>:

- Promotes a more neutral forearm position than does a standard mouse
- May be a good fit for employees who have difficulty with the standard (palm down) positioning due to limited range of motion or discomfort in the forearms or elbows
- Pointer speed controls on the side allow convenient adjustment
- Each of the six buttons is programmable by selecting one of 48 functions

- Can lead to the following signs that may contraindicate use of this product:
 - Moving the mouse primarily with hand or wrist motion
 - Tensing fingers, such as squeezing the mouse or holding fingers up
 - Stretching or widening the hand beyond a natural relaxed posture on the mouse
- Height of mousing surface is more critical than for a standard mouse to avoid awkward angling of wrist
- Fingers might be held awkwardly to reach the buttons if the button locations do not match the user's neutral finger placements
- The pointer speed button's location promotes awkward finger postures if the hand remains in clicking position on the mouse
- Repetitive finger motion and awkward posture may occur when using the scroll wheel
- Picking up the mouse during use increases the risk for injury
- One-sided design prevents this device from being used with the opposite hand



Humanscale Switch Mouse

Listed on UCSC Product list as:

Humanscale SwitchMouse with USB wire and plug; Product Code E6SMUSB







Manufacturer's Comments

The Switch Mouse is the revolutionary mousing solution that brings unprecedented ergonomics to computer users. This groundbreaking peripheral device boosts comfort and reduces injury risks through a number of new innovations. Its V-shaped base and four-way scrolling dish complement a built-in palm support for exceptional user comfort. Plus, the Switch Mouse is the only mousing solution that accommodates both left- and right-handed users while adjusting to fit the size of virtually any adult hand.

- V-shaped base positions wrist and arm at a natural angle
- Scrolling dish provides vertical and horizontal navigation
- Adjustable length ensures proper fit for most users
- Integrated palm support eliminates contact stress and reduces risk of carpal tunnel syndrome
- Symmetric shape accommodates left- or right-handed use
- Encourages the use of large arm and shoulder muscles, allowing delicate hand and wrist muscles to relax
- Programmable buttons for user-specified functions
- 1600 dpi resolution with optical scanning technology
- Cable Length: 200 cm (80")



- USB Connector
- Compatible with Windows 2000 and up, Mac OS9 and up

Manufacturer's Website:

http://www.humanscale.com/products/product_detail.cfm?group=SwitchMouse

Considerations for Recommending the Humanscale Switch Mouse

Before selecting any pointing device, read the *General Considerations* for *Recommending a Pointing Device* on page <u>76</u>.

Pro:

- Promotes a more neutral forearm position than does a standard mouse
- May be a good fit for employees who have difficulty with the standard (palm down) positioning due to limited range of motion or discomfort in the forearms or elbows
- Can be positioned with left or right tilt for use with either hand
- Length is adjustable to fit different hand sizes
- Built-in palm support may prevent unwanted planting and pivoting motions
- Four-way navigation dish replaces scroll wheel
- Software is available to program the buttons (only for Windows systems)

Con:

- The slightly larger size of this mouse may require more mouse area and may position the mouse higher than a standard keyboard
- The mouse is wider than some others and may encourage a wide pinch with the thumb and finger(s) to stabilize the device
- The hard plastic edges, although rounded, could potentially compress sensitive tissues of the wrist or palm
- Software for programming the buttons is available only for Windows



Humanscale Mouse Mate

Listed on UCSC product list as: Humanscale Mouse Mate; Product Code, S6MM-10

Product Comments

The Mouse Mate attaches directly to your mouse so your palm is supported, not your wrist. As you move your mouse, your palm is supported in a neutral position. This inexpensive retrofit converts an uncomfortable mouse into an ergonomic mouse for a fraction of the cost of an ergonomic mouse.



Product Description

- Adjusts to fit most mice
- Attaches directly to your mouse so your palm is supported, not your wrist
- As you move your mouse your palm is supported in a neutral position
- Comes with an extra high easy slide base to fit unusually tall mice
- Made of foam rubber and polyurethane
- Available in black only

Manufacturer's Website: (Product is not found on the Humanscale website)

Considerations for Recommending the Humanscale Mouse Mate

Before selecting any pointing device, read the General Considerations for Recommending a Pointing Device on page $\frac{76}{2}$.

Pro:

- The Mouse Mate elongates a mouse and may soften the points of contact
- The Mouse Mate may allow palm to relax more, particularly if the hand (base of palm to fingertips) is longer than average
- The shape of the Mouse Mate promotes neutral wrist posture for some users
- Two included base options allow the user to match the height with the shape of the mouse
- Velcro allows the Mouse Mate to detach and reattach if the "fit" needs a readjustment

Con:

• Some users find the soft rubber material of the Mouse Mate to be flimsy



- The placement or fit of the Mouse Mate sometimes positions the wrist or fingers in an awkward, flexed posture
- The protrusions or edges of the Mouse Mate may compress parts of the palm
- The base might detach during use, especially if the mouse is picked up
- If the user has a habit of pinching the sides of the mouse, the addition of the Mouse Mate can increase that tension and flexion by its shape in conjunction with the mouse
- The wrist and hand are held more rigid when resting the hand on the Mouse Mate because the shape of the Mouse Mate prevents alternative hand postures on the mouse



Kensington Expert Mouse®

Listed on UCSC Product list as: Kensington Expert Pro Trackball; Product Code 64325

Manufacturer's Comments

Designed for PCs and Mac's, the Expert Mouse® employs Kensington's Diamond Eye® optical technology for smooth, precise cursor movement. Surrounding the ball is a brand new implementation of Kensington's award winning Scroll Ring® that puts scrolling right at your fingertips. More comfortable than ever, the Expert Mouse® even comes with a soft new wrist rest-right in the box! You get all of these great new features along with the same, large ball, exceptional control, and ease-of-use that has set the industry standard for more than 15 years.



Manufacturer's Description

- Optical tracking for superior accuracy
- Scroll Ring® surrounds the ball for precise fingertip scrolling
- Large ball for maximum precision and control
- Detachable wrist rest cradles hand in comfort
- Metallic black and silver color scheme
- Windows 98 or later with USB or PS2 port
- Mac OS X or later with USB port
- Weight: .75 lbs.
- Dimensions: 5.75"L x 2.5"H (to the top of the ball) x 5.0"W. Housing height is 1.75"
- Cord length 6'
- Kensington 5-Year Warranty and free technical support

Manufacturer Website: http://us.kensington.com/html/2200.html

Considerations for Recommending the Kensington Expert Mouse

Before selecting any pointing device, read the *General Considerations* for *Recommending a Pointing Device* on page <u>76</u>.

Pro:

• Easier to control trackball movement speed compared to some trackballs



- Software provides multiple button programming for increasing efficiency and reducing physical strain and repetitive motion, such as designating buttons for drag-lock, double-click and shortcut keys
- The scroll wheel is large and circular. It can be turned with multiple fingers and moved using shoulder motion. (Many other wheels recruit the use of one finger, which can lead to overuse injuries.)
- Unlike a standard mouse, the trackball does not need to be grasped with the hand. Fingers and the palm are free to glide over the top of the trackball during use
- A trackball may require less space than a standard mouse, since the device stays in one place

- Some users feel that this trackball requires more force to move compared to other trackballs.
- Downward thumb motion is unnatural and repetitive thumb use to activate buttons may risk injury over time
- User may tend to hang the hand on the trackball with the wrist and hand in awkward postures
- The buttons are far apart and the ball is large. Small hands may stretch excessively to reach buttons



Kensington Orbit ® Optical Trackball

Listed on UCSC Product list as: Kensington Orbit Optical 2-button Optical Trackball; Product Code S964327

Manufacturer's Comments

Navigate with greater comfort and precision while saving valuable desktop space with the Kensington Orbit Optical Trackball. Its optical technology delivers precise cursor control with the touch of a finger while the two-button design provides an interface that's familiar to mouse users.

Manufacturer's Description

- Uses far less desk space than a mouse
- Optical technology delivers superior precision
- No cleaning required
- Ambidextrous design for left- or righthanded users
- USB and PS/2 connectivity for greater compatibility
- Five-year warranty, toll-free technical support, and 90-day no-risk trial

Manufacturer Website:

http://us.kensington.com/html/4771.html



Considerations for Recommending the Kensington Orbit Optical Trackball

Before selecting any pointing device, read the *General Considerations* for *Recommending a Pointing Device* on page <u>76</u>.

<u>Pro</u>:

- The optical technology enhances its precision
- Easier to control trackball movement speed compared to some trackballs
- Software enables trackball customization for button functions, pointer speed and acceleration, and scrolling speed and direction
- The scroll wheel is large and circular. It can be turned with multiple fingers and moved using shoulder motion unless two-fingered operations are required (i.e., dragging, highlighting, scrolling)
- Unlike a standard mouse, the trackball does not need to be grasped with the hand. Fingers and the palm are free to glide over the top of the trackball during use



• A trackball may require less space than a standard mouse, since the device stays in one place

- This trackball is sluggish to move compared to some other trackballs
- The trackball has only two buttons, which minimizes programming options for button designations
- User may tend to hang the hand on the trackball with the wrist and hand in awkward postures
- Continually-applied pressure with at least one digit and repetitive flexion of at least one digit must be performed simultaneously to drag, highlight and scroll using the trackball



Kensington Orbit® Trackball with Scroll Ring

Listed on UCSC Product list as: Kensington Orbit Trackball with Scroll Ring; Product Code S972337

Manufacturer's Comments

Navigate with greater comfort and precision while saving valuable desktop space with the Kensington Orbit Optical Trackball. Its optical technology delivers precise cursor control with the touch of a finger while the two-button design provides an interface that's familiar to mouse users.

Manufacturer's Description

- Scroll ring allows fast, click-free scrolling of web pages and documents
- Uses far less desk space than a mouse
- Optical technology delivers superior precision
- No cleaning required
- Ambidextrous design for left- or right-handed users
- USB connectivity
- PC and Mac® compatible
- Five-year warranty, toll-free technical support, and 90-day no-risk trial

Manufacturer Website: http://us.kensington.com/html/17531.html

Considerations for Recommending the Kensington Orbit Trackball with Scroll Ring

Before selecting any pointing device, read the *General Considerations* for *Recommending a Pointing Device* on page 76.

<u>Pro</u>:

- Easier to control trackball movement speed compared to some trackballs
- Software enables trackball customization for limited button functions, pointer speed and acceleration, and scrolling speed and direction





- The scroll ring and wheel are large and circular. They can be turned with multiple fingers and moved using shoulder motion unless two-fingered operations are required (i.e., dragging, highlighting, scrolling)
- Unlike a standard mouse, the trackball does not need to be grasped with the hand. Fingers and the palm are free to glide over the top of the trackball during use
- A trackball may require less space than a standard mouse, since the device stays in one place

- The plastic scroll ring is not as durable as a metal scroll ring
- Some users feel that this trackball requires more force to move compared to other trackballs
- The trackball has only two buttons, which minimizes programming options for button designations
- User may tend to hang the hand on the trackball with the wrist and hand in awkward postures
- Continually-applied pressure with at least one digit and repetitive flexion of at least one digit must be performed simultaneously to drag, highlight and scroll using the trackball



Kensington SlimBlade Trackball [™]

Listed on UCSC Product list as: Kensington SlimBlade Trackball; Product Code S972327

Manufacturer's Comments

Comfort and productivity are at your fingertips with the Kensington SlimBlade Trackball. The slim, low-profile design provides all-day comfort while the advanced dual laser sensors and large ball deliver exceptional precision. For even greater productivity, the four adjustable buttons can be set to the function or keyboard shortcut you use most with our TrackballWorks[™] software.

Manufacturer's Description

- Uses far less desk space than a mouse
- Includes dual lasers and a large ball for precision and scrolling.
- Personalize the trackball by adjusting pointer speed, scrolling and button functions via software.
- Compatible with many Mac and Windows environments.
- Five-year warranty and toll-free technical support.

Manufacturer Website: http://us.kensington.com/html/16632.html

Considerations for Recommending the Kensington SlimBlade Trackball

Before selecting any pointing device, read the *General Considerations* for *Recommending a Pointing Device* on page $\frac{76}{2}$.

Pro:

- Easier to control trackball movement speed compared to some trackballs
- Software enables modification of a few button functions, pointer speed and acceleration, and scrolling speed and direction
- The scroll wheel is large and circular. It can be turned with multiple fingers and moved using shoulder motion. (Many other wheels recruit the use of one finger, which can lead to overuse injuries.)





- Unlike a standard mouse, the trackball does not need to be grasped with the hand. Fingers and the palm are free to glide over the top of the trackball during use
- A trackball may require less space than a standard mouse, since the device stays in one place

- User may tend to hang the hand on the trackball with the wrist and hand in awkward postures
- Those who prefer an easy-glide trackball may feel this trackball is sluggish
- The height difference between the ball and the buttons may lead to awkward wrist and hand postures when elevating fingers to move the ball, especially when scrolling, dragging and highlighting
- Options for button functions are limited
- Highlighting, dragging and scrolling are two-fingered operations. This requires the hand to hold excessive tension



Logitech Cordless Optical TrackMan®

Listed on UCSC Products List as:

Logitech Cordless Optical Trackman; Product Code S99043690403

Manufacturer's Comments

The Cordless Optical Trackman is a trackball for those who use their computer day and night. An exceptionally comfortable ergonomic design delivers exceptional comfort – from dawn to dusk and beyond. You can cut the cord – and enjoy a clutter-free desktop. You'll enjoy the control and convenience of fingertip based control and eight programmable buttons.

Manufacturer's Description

- Comfortable ergonomic design
- Precise cursor control
- Stay-put design is a spacesaver



Manufacturer Website:

http://www.logitech.com/en-us/mice-pointers/trackballs/devices/189

Considerations for Recommending the Logitech Cordless Optical TrackMan

Before selecting any pointing device, read the *General Considerations for Recommending a Pointing Device* on page <u>76</u>.

Pro:

- Multiple programmable buttons allow customization for different finger placements
- Drag-lock allows dragging and highlighting without holding down a button
- The shape of the mouse promotes neutral right forearm posture

Con:

- The trackball has to be positioned fairly close to the receiver to work
- The receiver is corded and quite large (the size of a "hockey puck")
- The left-click button's click-force is substantial


- The trackball is shaped for right-hand use only
- Pads for keeping the trackball from slipping around on the surface are not wellplaced so the trackball may move unintentionally
- The right-click button is easily activated with minimal force and is positioned next to the ball in a location that can be pressed by accident



Logitech Trackman Marble Mouse®

Listed on UCSC Products List as: Logitech Trackman Marble Mouse; Product Code S9910000806

Manufacturer's Comments

Left handed? Right handed? When you're working on your computer day and night, and you want more flexibility, the Logitech® Trackman® Marble® will help increase vour comfort level. Whichever hand you use, this mouse keeps you comfortable and supported all day - and stays in one place. Convenient Forward and Backward buttons help you get around the Web with ease. Fast, accurate control is right at your fingertips with smooth-tracking Marble® optical technology.



Manufacturer's Description

- Ambidextrous trackball design
- Buttons let you easily move forward and backward when you're surfing the Web
- 3-year limited hardware warranty
- Logitech® software CD for Mac and PC is available to program the trackball for left or right hand use and customize three other button functions.
- USB-to-PS/2 adapter

Manufacturer Website:

http://www.logitech.com/en-us/mice-pointers/trackballs/devices/4680

Considerations for Recommending the Logitech Trackman Marble Mouse

Before selecting any pointing device, read the *General Considerations* for *Recommending a Pointing Device* on page <u>76</u>.

<u>Pro</u>:

• Five button functions are programmable



- The trackball can be easily moved to the left or the right side of the keyboard so the user can share the workload between the left and right arms
- A drag-lock option is programmable to allow one-fingered dragging, highlighting, and scroll bar movement without having to hold down a button
- This trackball is inexpensive and durable
- Users who like a fast-moving trackball will enjoy the Trackman Marble's easy-glide nature

<u>Con</u>:

• While the trackball software allows programmability, the right-click must be assigned to one of the larger buttons. Some users do not use the right-click function. Moreover, most keyboards have a right-click key placed along the bottom row. Logitech's software limitation prevents getting rid of the right-click function to assign a more favorable task to the large button



Logitech Wireless Mouse M510

Listed on UCSC Product list as:

Logitech M510 Cordless Laser Mouse; Product Code S9910-001822

Manufacturer's Comments

The Logitech M510 Cordless Laser Mouse is a fullsize, wireless laser mouse with more comfort and extra controls so you can do more, more easily. The full-size, contoured design and soft side grips keep your hand happy and in control.

You can do more, faster with Back/Forward buttons and side-to-side scrolling plus zoom. You might just forget this mouse runs on batteries with its hassle-free two-year battery life.

Manufacturer's Description

- Contoured design with soft side grips for use with either hand.
- Back and forward buttons conveniently located for right thumb.
- A scroll wheel allows side-to-side cursor motion and in and out zooming.
- SetPoint software allows you to configure the controls to your liking.



Manufacturer Website:

http://www.logitech.com/en-us/mice-pointers/mice/devices/6811

Considerations for Recommending the Logitech Trackman Marble Mouse

Before selecting any pointing device, read the *General Considerations* for *Recommending a Pointing Device* on page <u>76</u>.

Pro:

- Wireless
- Small unifying receiver
- Smooth and quiet scroll wheel
- Software allows buttons to be reconfigured according to the user's needs

Con:



- Poor, jumpy cursor tracking
- The back button is placed in an awkward-to-reach location for some users
- The mouse is heavy compared to wired mice (two AA batteries inside)



Alternative Keyboards

General Considerations for Recommending an Alternative Keyboard

An alternative keyboard may help to improve posture, efficiency and comfort. When deciding whether to recommend an alternative keyboard, review these common features of alternative keyboards and consider which features may benefit the individual.

- Split of keyboard
 - Purpose: Keys are separated in the center with the goal of aligning the angle of the keys to a worker's natural wrist angle
 - <u>Pro</u>:
 - May benefit a worker with:
 - Broad shoulders
 - Wide torso
 - Tendency to angle the wrists toward the little finger side of the hand when using a standard keyboard
 - Nonstandard layout and/or size of accessory keys may be beneficial
 - <u>Con</u>:
 - May make it more difficult for a sight typist (one who must look at the keys while typing) to see the keys without using awkward neck positions
 - The arrangement of the keys relative to the "split" may not always match the worker's keyboard training. For example, if the worker is accustomed to typing the "6" with the right hand but the "6" key is now on the left side of the split, (s)he must learn a new technique or risk awkward postures
 - Accessory keys may be positioned and/or sized differently than what the worker is accustomed to
 - Some workers may react to a split keyboard by splaying out the elbows instead of relaxing their arms and using neutral wrist positioning. This unintended behavior can negate the reason for the split keyboard and result in awkward shoulder posture
 - Nonstandard layout and/or size of accessory keys may not benefit all individuals
 - Split keyboard variations
 - Fixed split (e.g. Microsoft Natural):
 - <u>Pro</u>: No keyboard adjusting necessary
 - Con: Lacks flexibility to fit various sized workers
 - Adjustable split (e.g. Goldtouch and Kinesis):
 - <u>Pro</u>: Can be fitted to various sized workers and the split may be gradually introduced to ease transition



- <u>Con</u>: Adjusting the split may require some trial and error and/or use of additional attachments (at extra cost)
- Hinged split (e.g. Goldtouch):
 - <u>Pro</u>: Keyboard halves stay attached to one another
 - <u>Con</u>: Doesn't accommodate workers who need very wide separation of keyboard halves
- Complete split (e.g. Kinesis Freestyle):
 - <u>Pro</u>: Can accommodate worker with very wide torso or shoulders
 - <u>Con</u>: Keyboard halves may be more prone to accidental jostling out of position
- Angled contour of keys without an actual split (e.g. Kensington Comfort Type)
 - <u>Pro</u>: Helps encourage natural wrist position through slight angling of keys while maintaining standard size and key locations. May be a good solution for sight typists (those who must look at the keys while typing)
 - <u>Con</u>: Slight angling is not enough for some workers to achieve natural wrist angles
- Integrated or attached wrist (or palm) support (e.g. Microsoft Natural, Kinesis):
 - <u>Pro</u>: May help the user maintain a neutral wrist position
 - <u>Con</u>: May cause difficulties for some workers due to increased distance to the keyboard and potential contact pressure on the wrist and palm
- Attached, embedded and/or separate numeric keypad: see "Numeric keypad variations" descriptions below
- Integrated pointing device: see "Integrated Touch Pad" description below
- Tenting of keyboard
 - Purpose: Positions the keys higher at the midline of the keyboard and lower near the sides with the goal of positioning the user's forearms in a more natural position
 - <u>Pro</u>: May benefit a worker who has difficulty or discomfort with holding one or both hands in the palm-down (normal keying) position
 - <u>Con</u>: May make it more difficult for a sight typist (one who must look at the keys while typing) to see the keys without using awkward neck positions. Increases the height of the keyboard, preventing some workers from keying at or below elbow level
 - Tented keyboard variations
 - Fixed tenting (e.g. Microsoft Natural)
 - <u>Pro</u>: No keyboard adjusting necessary
 - Con: Lacks flexibility to fit various sized workers
 - Adjustable tenting (e.g. Goldtouch and Kinesis):



- <u>Pro</u>: Can be fitted to various sized workers and the tenting may be gradually introduced to ease transition
- <u>Con</u>: Adjusting the tenting may require some trial and error and/or use of additional attachments (at extra cost)
- Short ("mini") keyboard (without split and tent)
 - Purpose: Designed with a smaller footprint to take up less space on the work surface
 - <u>Pro</u>: Reduces reach to the mouse (or other work tools) on the right side. Leaves room for other work items. Maintains standard contour (not split or tented)
 - <u>Con</u>: Lacks a numeric keypad, which may be a problem for some workers who use the numeric pad frequently and need it within close reach on the right side. [Separate numeric keypads can be used see pros and cons of separate numeric keypads below.]
 - Variations of short ("mini") keyboards:
 - Standard size and layout of keys
 - <u>Pro</u>: Does not require relearning of key locations
 - <u>Con</u>: Does not improve (or otherwise alter) movement patterns
 - Nonstandard size and/or layout of keys
 - <u>Pro</u>: may promote improved movement patterns
 - <u>Con</u>: may require relearning of key locations. The alternate arrangement of keys may be problematic for some individuals, depending on tasks and usage patterns
- Numeric keypad variations
 - Attached numeric keypad (e.g. Microsoft Natural):
 - <u>Pro</u>: keeps numeric keypad accessible for worker who frequently uses and is accustomed to using a numeric pad
 - <u>Con</u>: As part of a keyboard with a fixed split, can take up increased work surface space, increase the reach to a mouse on the right side and may not fit well on some keyboard/mouse platforms
 - Embedded numeric keypad (e.g. Goldtouch, Kinesis):
 - <u>Pro</u>: Does not require extra space on work surface. Can be used within close reach of the worker
 - <u>Con</u>: Requires activation by pressing a button or switch. Activating keys for numeric function temporarily deactivates the alpha functions of those keys. Key alignment may differ from that of a standard numeric keypad
 - Separate numeric keypad (e.g. Goldtouch and Kinesis):
 - <u>Pro</u>: Allows for flexibility in positioning with respect to other work tools. Depending on the worker's habits and tasks, he or she may: use the numeric pad on the left side; move the numeric pad out of the way when



not needed; or do away with the numeric pad completely, leaving room nearby for other work tasks such as mousing and writing.

- <u>Con</u>: Because of its larger footprint compared to an attached numeric pad, it may crowd a small work space. It may move out of position, leading to awkward reaching
- Integrated touchpad
 - <u>Pro</u>: Can be used within close reach of the worker. Leaves space for other items on the work surface if a separate pointing device is not used (this is not recommended). The built-in touchpad may be beneficial as a secondary pointing device, or as the primary pointing device when shoulder motion or shoulder posture is limited
 - <u>Con</u>: Touchpad may be difficult for the individual to use with recommended hand and arm postures such as relaxed shoulder, neutral wrist position and gently curved fingers. Fixed location on the keyboard may not be optimal for the individual
 - For additional pros and cons associated with touchpad use, see the <u>Cirque</u> <u>EasyCat touchpad</u> information listed under "Pointing Devices"



Adesso EasyTouch Mini Keyboard

Listed on UCSC Product list as: Adesso EasyTouch Mini Keyboard-Blk; Product Code S9AKB110B Adesso EasyTouch Mini Keyboard-Wht; Product Code S9AKB110W

Manufacturer's Comments

The stylish design of this mini keyboard compliments any desktop or laptop. Users can connect with their PC through a USB or PS/2 connector, without the hassle of installing a driver. Users can take pleasure in typing in comfort with membrane keys whether working or playing online games. It includes an embedded numeric keypad, a Windows Vista key, 12 function keys, LED indicator for num lock, caps lock and scroll lock keys. With



its smooth and sleek surface, this is a perfect selection that will look impressive on any desk space.

Manufacturer's Description

- The mini size keyboard is less than 12" wide, and is an impressive space saver for desktops in homes or offices. It is ideal for use in POS, kiosks, warehouses, manufacturing environments, or in any small working area
- The mini size keyboard is designed with 87 keys, and is equipped with an embedded numeric keypad, featuring a Num Lock, Scroll Lock and Caps Lock LED display
- The membrane key switch features more than a five million lifecycle, and is designed with a silicone rubber material, which can reduce noise when typing, offering a faster and quieter typing experience
- Cable length: 6 feet
- USB & PS/2, no driver needed
- Compatible with Windows 7, Vista, XP or 2000
- Available in Black or White

Manufacturer's Website: http://www.adesso.com/en/home/keyboards.html

Considerations for Recommending the Adesso EasyTouch Mini Keyboard



Before selecting an alternative keyboard, read the *General Considerations for Recommending an Alternative Keyboard* on page <u>109</u>.

Characteristics

- Short keyboard (without tent or split)
- Embedded numeric keypad
- Separate numeric keypad may be ordered (but not recommended by the manufacturer)

Pro:

- Many workers find the keys quieter and easier to press than those of other keyboards
- The width of the keyboard is narrower than most alternative keyboards so allows a pointing device to move within close reach of the user, regardless of which side it is placed

Con:

- The function keys and escape key are smaller than standard key size
- Some accessory key placements are nonstandard and their locations will have to be relearned



Goldtouch Ergonomic Adjustable Keyboard

Listed on UCSC Product list as: Goldtouch Split Keyboard USB w/ PS2 adapter for PC, black; Product Code S9GTN0077





Manufacturer's Comments

The Adjustable Ergonomic Keyboard allows you to adjust the two alphanumeric sections both horizontally and vertically to suit your individual body requirements. This helps you assume a more natural posture that is conducive to improving comfort and productivity while using your computer. The keyboard has also been designed to disperse the workload to both left and right hands. On the standard keyboard most of the work is on the right side. The Goldtouch Keyboard has placed some of the keys such as the Home, Insert, End, Page Up, Page down, and Delete key on the left side to give more balance to the work. A Cornell University research study showed an 80% reduction in discomfort after 7 weeks among participants who used the Goldtouch ergonomic split.

Manufacturer's Description

- USB or USB w/PS2 Adapter
- Adjustment for wrist splay in the horizontal plan: 0°-30°, continuously variable
- Adjustment for wrist pronation vertical tenting 0°-30°, continuously variable
- Easily adjusted, locking ball and socket latch mechanism
- Small, space saving foot-print to bring your mouse inside your ergonomic "comfort zone"
- Editing key layout for left-right work distribution
- Large space bars for easy thumb use
- Full size, full travel, tactile feedback keys with soft end-stop
- Low noise key actuation



- Standard alphanumeric key layout (QWERTY)
- Compatible with Windows 2000, XP and Vista
- Optional 10-key numeric keypad available (see following item)

Approximate* closed dimensions:

- Width: 151/4 inches
- Depth: 7 inches
- Height at home row: 30 mm or 11/6 inches
- Height: 3.3 lb

Flat and fully open:

- Width: 18 inches
- Height maximum: 41/2 inches
- * The Goldtouch Keyboard is continuously adjustable in the range 0° to 30°, both horizontally and vertically. Its dimensions vary due to this adjustability.

Disclaimers

Do Not Plug the USB Goldtouch Keyboard into the USB Keypad – the PC will not recognize it.

Manufacturer Website:

http://www.keyovation.com/p-64-goldtouch-adjustable-keyboard-black.aspx

Considerations for Recommending the Goldtouch Ergonomic Adjustable Keyboard

Before selecting an alternative keyboard, read the *General Considerations for Recommending an Alternative Keyboard* on page <u>109</u>.

Characteristics

- Adjustable, hinged split
- Adjustable tenting
- Separate palm support pads may be ordered
- Embedded numeric keypad
- Separate numeric keypad may be ordered

Pro:

- The tent and split features are continuously variable to adapt to any position within a wide (30-degree) range
- Adjustable split and tenting are possible without additional accessories
- The combined split and tent setting can be locked into place
- Accessory keys are situated on the left and the right of the keyboard, which will allow the worker to distribute the workload between both hands



• Many workers find the keys quieter and easier to press than those of other keyboards

<u>Con</u>:

• The keyboard must be on an even surface to adjust since the keyboard sections can misalign, making the keyboard wobbly



Goldtouch for Mac Adjustable Keyboard – Black

Listed on UCSC Product list as:

Goldtouch adjustable ergonomic split keyboard for Mac, black; Product Code S9GTUMACB

(see images on page 115)

Manufacturer's Comments

Mac Users Rejoice! Now All Mac users can benefit from a keyboard specifically addressing their needs. The Goldtouch for MAC remains the only keyboard designed to properly straighten the wrists and arms without extra accessories or attachments! Because a Goldtouch keyboard is designed to fit the range of body types, not just the average, the standard Goldtouch for Mac Adjustable Keyboard is the only keyboard designed to properly straighten the wrists and arms while aligning with the shoulders to achieve a neutral typing posture. No other keyboard allows for the range of adjustability as a Goldtouch for Mac Adjustable keyboard.

Manufacturer's Description

- Adjustability: 0°-30° adjustment for ulnar deviation (wrist splay) in the horizontal plan, combined with 0°-30° adjustment for wrist pronation (vertical tenting)
- Soft key touch, low activation force and full key travel distance provides keying comfort and reduces risk from "bottoming out" when keying
- Compact size allows for use in limited space environments, and reduces shoulder abduction when reaching for mice and other peripherals
- Ease of use and intuitive design allow new users to adjust the keyboard to a comfortable typing position without additional accessories or attachments
- Apple Control Key
- Right and Left Apple and Option Keys
- CD Eject
- Mute and Volume Control
- Compatible with Mac OS 10.4 and newer
- USB Connection

Disclaimers

- The embedded keypad on the Apple Compatible Keyboard may not be fully compatible with Windows Applications or Operating Systems
- Do Not Plug the USB Goldtouch Keyboard into the USB Keypad the PC will not recognize it
- Please be sure to follow instructions on the Apple website on creating a backup disc with all drivers when installing a Windows OS onto your Mac computer. The Mac may not properly recognize input devices without performing this step when using Parallels or Bootcamp



Approximate* closed dimensions:

- Width: 15-1/4 inches
- Depth: 7 inches
- Height at home row: 30 mm or 11/6 inches
- Height: 3.3 lb.

Flat and fully open:

- Width: 18 inches
- Height maximum: 41/2 inches

* The Goldtouch Keyboard is continuously adjustable in the range 0° to 30°, both horizontally and vertically. Its dimensions vary due to this adjustability.

Manufacturer Website:

http://www.keyovation.com/p-133-goldtouch-for-mac-adjustable-keyboard-black.aspx

Considerations for Recommending the Goldtouch Ergonomic Adjustable Keyboard

Before selecting an alternative keyboard, read the *General Considerations for Recommending an Alternative Keyboard* on page <u>109</u>.

Characteristics

- Adjustable, hinged split
- Adjustable tenting
- Separate palm support pads may be ordered
- Embedded numeric keypad
- Separate numeric keypad may be ordered

<u>Pro</u>:

- The tent and split features are continuously variable to adapt to any position within a wide (30-degree) range
- Adjustable split and tenting are possible without additional accessories
- The combined split and tent setting can be locked into place
- Accessory keys are situated on the left and the right of the keyboard, which will allow the worker to distribute the workload between both hands
- Many workers find the keys quieter and easier to press than those of other keyboards
- The Goldtouch for Mac keyboard has both left and right Apple and Options keys to allow two-handed hotkey keyboard shortcuts

<u>Con</u>:

• The keyboard must be on an even surface to adjust since the keyboard sections can misalign, making the keyboard wobbly



• The Mac keyboard has only one standard control key and it is positioned far from the other keys. Those who use one handed keyboard shortcuts involving this key may experience overstretching of the fingers



Goldtouch Go! Travel Keyboard

Listed on UCSC Product list as: Goldtouch Go! Travel Keyboard; Product Code S9GTP0055

Manufacturer's Comments

The Goldtouch Go! Travel Keyboard is the ONLY compact keyboard that reduces or eliminates risk factors that lead to injury. At a mere 1 lb., it allows road warriors and mobile professionals to safely work wherever their job takes them. With keys approximately the size of those found on 14" notebooks, the keyboard can accommodate large fingers, and offers similar key feel and travel distance as found on the standard Goldtouch. Other "mini" or "compact" keyboards have shortened key travel distance which are too short or hard, and can cause significant pain from "bottoming out."

The compact design of the Go! Travel Keyboard makes better use of limited space environments, and allows for external mice to be placed even closer



to the keyboard for reduced shoulder pain and increased comfort. The Go! Travel Keyboard comes with two protective covers (reduces exposure to impacts that could lead to key cap loss when traveling). To remove the covers just slide them into the lower groove of each side of the keyboard, adjust your keyboard and place your keyboard on top of your notebook key for an instant office (rubber backing prevents keyboard from slipping off notebook).

Manufacturer's Description

- Adjustability: 0°-30° adjustment for ulnar deviation (wrist splay) in the horizontal plan, combined with 0°-30° adjustment for wrist pronation (vertical tenting)
- Protective Removable Covers: Allows keyboard to be placed on the notebook
- Soft key touch, low activation force, full key travel distance provides keying comfort and reduces risk from "bottoming out" when keying
- Compact size allows for use in limited space environments and reduces shoulder abduction when reaching for mice and other peripherals
- Ease of use and intuitive design allow new users to adjust the keyboard to a comfortable typing position without additional accessories or attachments



- Compatible with PC and Mac
- Contains a USB port on the side of the keyboard to attach a low powered device such as a Goldtouch Key Pad or mouse

Dimensions: 13.25" x6" x 1" (at highest point)

Manufacturer Website: http://www.keyovation.com/c-2-ergonomic-keyboards.aspx

Considerations for Recommending the Goldtouch Go! Travel Keyboard

Before selecting an alternative keyboard, read the *General Considerations* for *Recommending an Alternative Keyboard* on page <u>109</u>.

Characteristics

- Adjustable, hinged split
- Adjustable tenting
- Embedded numeric keypad
- Separate numeric keypad may be ordered

Pro:

- Lightweight and easily transportable with key covers
- Narrower than other split/tent adjustable keyboards so it reduces the reach to the mouse on either side of the keyboard
- Alpha-numeric keys are full-sized
- The keys are quieter than most other alternative keyboards
- Accessory keys are placed on both sides of the keyboard, which will allow the worker to distribute the workload between both hands

<u>Con</u>:

- Users have reported poor quality, such as keys not functioning correctly
- Function keys, escape key and some accessory keys are smaller than standard keys



Goldtouch 10-Key Numeric Keypad (PC or Mac)

Listed on UCSC Product list as: Goldtouch Numeric Keypad USB for PC, black; Product Code S9GTC0077 Goldtouch Numeric Keypad for Mac, black; Product Code S9GTCMACB

Manufacturer's Comments

The Goldtouch Numeric Keypad, with its USB hub, complements the Goldtouch keyboard and allows the convenience of remaining detached from the keyboard itself for optimal mouse and keypad placement. With its crisp and tactile feel, and the right amount of audible feedback, hardcore number crunchers will enjoy the ease of having a numeric keypad at their workstation or attached to their notebooks anywhere they work.



Manufacturer's Description

- USB Connector
- 22 Keys
- 2 USB Ports
- The keypad has all the functions that will make you work efficiently in Excel spreadsheets by providing easy access to essential keys such as:
 - Tab, Escape, and Backspace
 - frequently needed symbols: , () % \$ Y L E c $\$
- Calculator functions such as: MS M+ MC MR will make the use of MS calculator much easier as will the Clear (Esc), CE (Del), Backspace, +/-, and =
- The inclusion of a 00 will help your efficiency in many applications when working with dollars and cents

Notes:

- 1.) The PC version will not work with the Mac please be sure to order the Mac version if the keypad is intended for use on a Mac.
- 2.) Do Not plug the USB Goldtouch Keyboard into the Keypad the PC will not recognize it.

Manufacturer Website:

http://www.keyovation.com/c-2-adjustable-keyboards-numeric-keypads.aspx

Considerations for Recommending the Goldtouch 10-Key Numeric Keypad



Before selecting an alternative keyboard, read the *General Considerations for Recommending an Alternative Keyboard* on page <u>109</u>.

<u>Pro</u>:

- A separate numeric keypad can be positioned easily for left or right hand use, or moved into position only when in use in order to bring the mouse closer whenever the numeric keypad is dormant
- Can be set for standard numeric keypad setting or set for a layout of other common functions, such as Tab, Escape, Backspace, symbols and calculator functions

<u>Con</u>:

- The Goldtouch numeric keypad for the PC is not Mac-compatible
- The Goldtouch keyboard and numeric keypad are not able to daisy-chain to share one USB port



Kinesis Advantage Contoured Keyboard

Listed on UCSC Product list as:

Kinesis Advantage - minimal risk contoured keyboard; Product Code S9KB500USB-BLK



Manufacturer's Comments

The Kinesis® Contoured Keyboard family is based on a unique, patented design that minimizes the pain and strain typists experience from heavy use of conventional computer keyboards. Yet productivity is greater than with any other keyboard, leading to its popularity with intensive typists everywhere. This ergonomic design resulted from almost two years of research and testing and has proven itself in more than ten years of commercial use. Kinesis contoured keyboards are prescribed by physicians and placed by therapists dealing with keyboard-related overuse injuries.

Manufacturer's Description

- Advanced ergonomics PLUS on-board programmability
- Compatible with both PC and Mac operating systems
- Instant configuration for Windows, Mac and non-Windows PC operating environments includes Windows and Mac legended keys
- Integrated two-port USB hub
- USB devices can be hot-plugged safely
- Select 24, 36, or 48 macros (56, 38, or 28 characters long, respectively)
- Supports new triple action foot switch
- Available USB port
- Windows 98 or higher, Mac OS 8.6 and higher
- No special drivers required



- Dual legends available for QWERTY / Dvorak key layouts
- Width: 16.5 inches
- Height: Maximum is 2.9 inches high
- Depth (front-to-back): Approximately 8 inches
- Two-Year Limited Warranty

Manufacturer Website: http://www.kinesis-ergo.com/

Considerations for Recommending the Kinesis Contoured Keyboards USB

Before selecting an alternative keyboard, read the *General Considerations for Recommending an Alternative Keyboard* on page <u>109</u>.

Characteristics

- Fixed complete split
- Fixed tenting
- Integrated wrist (palm) support
- Embedded numeric keypad
- Separate numeric keypad may be ordered (but not recommended by manufacturer)

<u>Pro</u>:

- Prompts worker into a neutral hand posture
- Minimizes shoulder motion, so may be beneficial for those with certain kinds of injury or disability
- Fewer accessory keys are placed near the outer portions of the keyboard, decreasing the need to reach with the little fingers
- Keyboard configurations can be switched easily between MAC, Windows, and non-Windows operating systems

<u>Con</u>:

- Due to the very unusual design, several hours of retraining may be needed for effective use
- The keyboard height prevents some workers from keying at or below elbow level
- The keyboard layout places most accessory keys in a position to be used by the thumbs. This layout risks overuse of the thumbs, which are the most valuable digits
- The keyboard may add ergonomic risk factors by promoting small muscle use, static postures and contact pressure (because the wrists tend to rest on the keyboard)



Kinesis Freestyle Solo™ Keyboard for PC, Black

Listed on UCSC Product list as:

Kinesis Freestyle Solo Keyboard for PC, Black (8" separation); Product Code S9KB700PBus

Kinesis Freestyle Solo Keyboard for PC, Black (20" separation); Product Code S9KB700PBus20



Manufacturer's Comments

Accommodates a wide range of humans from small to tall and body types in between, the Freestyle Solo allows for maximum flexibility catering to each individual's unique needs. At only 15 3/8 inches wide the Freestyle Solo provides for close placement of any pointing device reducing over reach issues. Disconnecting the pivot tether allows up to eight inches of complete separation of both left and right keying modules (or



twenty inches of separation for the wider tether model). This design greatly reduces and/or eliminates ulnar deviation one of the leading causes of discomfort and pain while typing. The Solo serves as an enhanced traditional compact keyboard but offers users the additional ability to splay and separate the two keying modules. Coupled with the user convertible configurations possible with the optional accessory kits, the Freestyle family offers the most configurations of any ergonomic keyboard. It is a great option for users that want to place a trackball, touchpad or a separate 10-key between the two modules.



Manufacturer's Description

- Sleek low profile: minimal height effectively creates negative slope and reduces extension
- Narrow foot print for comfortable mousing and keying
- Separate and adjustable left & right keying modules
- Low-force key switches
- Embedded 10-key
- Driverless hot keys for commonly used mouse actions (Cut, Copy, Paste, Page Fwd, Page Back, Home, and Search)
- The Freestyle Solo is compatible with all Windows, Sun, and Linux systems that have an available USB port
- Choose between up to eight inches or twenty inches of complete separation between the left and right keying modules with a black linking cable
- Ideal for positioning a 10-keypad, trackball, or touchpad in the space between each module
- Adjusts for both shoulder width, arm and wrist angle
- Both modules can be attached with the included Pivot Tether™ while still allowing an infinite amount of splay
- Slide release button allows for easy attachment of tether and/or incline accessories
- Double wide delete and escape keys
- Two year limited warranty

Product Specifications

- Two year limited warranty
- Length: 15 3/8 inches
- Depth: 7 1/4 inches
- Max Height: 1 3/16 inches
- Key Height: 1 1/8 inches
- Weight: 2 lbs 3 ounces
- USB Cable Length: 6 feet

Note: An optional Kinesis Freestyle Incline Accessory Kit is available (see page 137).

Manufacturer Website: http://www.kinesis-ergo.com/

Considerations for Recommending the Kinesis Freestyle Convertible™ Keyboard

Before selecting an alternative keyboard, read the *General Considerations* for *Recommending an Alternative Keyboard* on page <u>109</u>.

Characteristics



- Adjustable split choice of complete separation (without incline) or hinged split
- Adjustable tenting (available through purchase of incline kit)
- Wrist (palm) support available (and required as a part of incline kit setup)
- Embedded numeric keypad
- Separate numeric keypad may be ordered

Pro:

- Adjusts up to 8 inches in width separation but can also be pushed together to approximate within an inch a standard keyboard's alpha section
- Accessory keys are situated on the left and the right of the keyboard, which will allow the worker to distribute the workload between both hands
- The keyboard has a zero degree slope that may help promote neutral wrist posture
- Regular use of the driverless hot keys (Internet Page-Forward and Page-Back, Search, Home, Cut, Copy, and Paste) can reduce ergonomic risks associated with repetitive and prolonged mousing
- The Delete and Escape keys are wide, which makes them easy to find and press
- Keys are fairly quiet
- Except for some accessory/hot keys, key placements are similar to standard keyboards to minimize adaptation time
- Available in both PC and Mac versions

Con:

- Tenting is only possible with installation of an additional accessory (see page 137). The tenting accessories require assembly onto the keyboard and necessitate the addition of a front "palm support" ledge that may cause difficulties for some workers
- Some of the accessories are made of thin plastic that may seem flimsy and unsecure to some users
- The positions of the keyboard sections are not lockable so need to be remembered and inspected regularly by the user to foster neutral postures



Kinesis Freestyle Solo™ Keyboard for Mac

Listed on UCSC Product list as:

Kinesis Freestyle Solo Keyboard for Mac (8" separation); Product Code S9KB700MWus Kinesis Freestyle Solo Keyboard for Mac (20" separation); Product Code S9KB700MWus20

(see images on page 127)

Manufacturer's Comments

Accommodates a wide range of humans from small to tall and body types in between, the Freestyle Solo allows for maximum flexibility catering to each individual's unique needs. At only 15 3/8 inches wide the Freestyle Solo provides for close placement of any pointing device reducing over reach issues. Disconnecting the pivot tether allows up to eight inches of complete separation of both left and right keying modules (or twenty inches of separation for the wider tether model). This design greatly reduces and/or eliminates ulnar deviation, one of the leading causes of discomfort and pain while typing. The Solo serves as an enhanced traditional compact keyboard but offers users the additional ability to splay and separate the two keying modules. Coupled with the user convertible configurations possible with the optional accessory kits, the Freestyle family offers the most configurations of any ergonomic keyboard. It is a great option for users that want to place a trackball, touchpad or a separate 10-key between the two modules.

Manufacturer's Description

- Perfect for individuals requiring greater separation than what is provided by other ergonomic keyboards
- The Freestyle Solo is compatible with Mac OS 8.6 and higher (special actions on function keys F3, F4 & F11 require OS X 10.4 or newer). Also, hot keys on F5 through F7 require the Apple keyboard update 1.1 or newer
- Sleek low profile: minimal height effectively creates negative slope and reduces extension
- Narrow foot print for comfortable mousing and keying
- Separate and adjustable left/right keying modules
- Low-force key switches
- Top row driverless hot keys (like the new iMac keyboards plus more! Esc/force quit, Brightness, Exposé, Dashboard, Play Audio, Audio Volume, Dock, Eject, and Off/Sleep)
- Left Side driverless hot keys for commonly used mouse actions (Internet Page-Forward and Page-Back, Beginning-of-Line, End-of-Line, Cut, Undo, Copy, Select-All, and Paste)
- Choose between up to eight inches or twenty inches of complete separation between the left and right keying modules with a black linking cable



- Ideal for positioning a 10-keypad, trackball, or touchpad in the space between each module
- Adjusts for both shoulder width, arm and wrist angle
- Both modules can be attached with the included Pivot Tether™ while still allowing an infinite amount of splay

Product Specifications

- Length: 15 3/8 inches
- Depth: 7 1/4 inches
- Max Height: 1 3/16 inches
- Key Height: 1 1/8 inches
- Weight: 2 lbs 3 ounces USB Cable Length: 6 feet

Manufacturer Website: http://www.kinesis-ergo.com/

Considerations for Recommending the Kinesis Freestyle Solo™ Keyboard for Mac

Before selecting an alternative keyboard, read the *General Considerations* for *Recommending an Alternative Keyboard* on page <u>109</u>.

Characteristics

- Adjustable split choice of complete separation or hinged split
- Adjustable tenting (available through purchase of incline kit)
- Wrist (palm) support available (and required as a part of some incline kit setups)
- Embedded numeric keypad
- Separate numeric keypad may be ordered

<u>Pro</u>:

- Adjusts up to 8 (or 20) inches in width separation but can also be pushed together to approximate within an inch a standard keyboard's alpha section
- Accessory keys are situated on the left and the right of the keyboard, which will allow the worker to distribute the workload between both hands
- The keyboard has a zero degree slope that may help promote neutral wrist posture
- Regular use of the driverless hot keys (Internet Page-Forward and Page-Back, Search, Home, Cut, Copy, and Paste) can reduce ergonomic risks associated with repetitive and prolonged mousing
- The Delete and Escape keys are wide, which makes them easy to find and press
- Keys are fairly quiet
- Except for some accessory/hot keys, key placements are similar to standard keyboards to minimize adaptation time



Con:

- Tenting is only possible with installation of an additional accessory. The tenting accessories require assembly onto the keyboard and some necessitate the addition of a front "palm support" ledge that may cause difficulties for some workers
- Some of the accessories are made of thin plastic that may seem flimsy and unsecure to some users
- The positions of the keyboard sections are not lockable so need to be remembered and inspected regularly by the user to foster neutral postures



Kinesis Freestyle Low Force Numeric Keypad

Listed on UCSC Product list as:

Kinesis Freestyle Low Force Numeric Keypad for PC (black); Product Code S9AC210USBblk

Kinesis Freestyle Low Force Numeric Keypad for Mac (white); Product Code S9AC210MUSBwht



Manufacturer's Comments

The Low-Force Numeric Keypad allows users flexibility in positioning the keypad to the right or left of the keyboard. The integrated 2-port USB 1.1 hub enables you to easily connect other USB devices. Low force, tactile mechanical key switches add to both comfort and operating life. The Low-Force Numeric Keypad connects to an available USB port on your computer and is compatible with virtually any USB-capable operating system.

Product Features

- Long lasting lasered key legends
- PC versions work with virtually all USB capable PC operating systems
- Mac version is compatible with Mac 8.6 and higher
- No special drivers required

Dimensions

- Height: 1.25"
- Width: 3.75"
- Depth front-to-back: 6.0"
- Cable Length: 6 ft.



Manufacturer Website: http://www.kinesis-ergo.com/

Considerations for Recommending the Kinesis Freestyle Low Force Numeric Keypad

Before selecting an alternative keyboard, read the *General Considerations for Recommending an Alternative Keyboard* on page <u>109</u>.

Pro:

- A separate numeric keypad can be positioned easily
- Can be set for standard numeric keypad setting or set for a layout of other common functions, including navigational and accessory buttons

Con:

• The keypad will only function with either Mac- or PC-compatible, depending on the version selected



Kinesis Freestyle Solo Palm Supports

Listed on the UCSC Products List as:

Kinesis Freestyle Palm Supports, black (pair); Product Code S9AC706PSblk Kinesis Freestyle Palm Supports, white (pair); Product Code S9AC706PSwht

Manufacturer's Comments

(Regarding all Freestyle Keyboard Tenting Accessories) Freestyle VIP[™], Freestyle V3[™] and Freestyle Ascent[™] Multi-Tent[™] can be purchased to provide additional capabilities These configurations allow the user to choose features that offer complete separation, adjustable front splay, adjustable or fixed



tenting, with or without integrated and removable, padded palm supports.

Manufacturer's Description

- Palm supports attach easily to the front edge of the Freestyle Solo keyboard
- Promotes neutral wrist posture
- Palm pads included
- Incompatible with the V3 accessory

Manufacturer's Website: http://www.kinesis-ergo.com/

Considerations for Recommending the Kinesis Freestyle Palm Supports

Before selecting keyboard accessories, read the *General Considerations* for *Recommending an Alternative Keyboard* on page <u>109</u>.

Pro:

- Prevents the wrists from dropping below the height of the keyboard into an awkward posture
- Hard plastic supports come with a set of attachable soft palm pads

<u>Con</u>:

- Some users might compress their wrists or hands against the palm supports/pads
- Users who plant their wrists on the pads will perform repetitive wrist, hand and/or finger motions in awkward postures
- The pads extend the reach to the keyboard



Replacement Palm Pads for the Freestyle Keyboard

Listed on UCSC Products List as: Kinesis Black Freestyle palm pads (pair); Product Code S9AC700PPblk Kinesis Silver Freestyle palm pads (pair); Product Code S9AC700PPslv



Manufacturer's Comments

- Replacement palm pads attach easily to the front palm supports of the Freestyle Solo keyboard
- Promotes neutral wrist posture

Manufacturer Website: http://www.kinesis-ergo.com/

Considerations for Recommending the Kinesis Replacement Palm Pads for the Freestyle Keyboard

Before selecting an alternative keyboard, read the *General Considerations for Recommending an Alternative Keyboard* on page <u>109</u>.

Purpose:

- Replaces worn pads for the Kinesis Freestyle Solo Palm Supports
- Pads are softer than hard plastic if it comes in contact with the wrists and hands

Pro and Con:

Please read Pro and Con for the Kinesis Freestyle Solo Palm Supports (page <u>135</u>).



Kinesis Freestyle Incline Tenting Accessory

Listed on UCSC Product list as: Kinesis Freestyle Incline Tenting Accessory; Product Code S9AC710blk Kinesis Freestyle Incline Tenting Accessory for Mac; Product Code S9AC710wht





Vendor's Comments

The Freestyle Solo keyboard attaches easily to the Incline accessory base a moderate fixed tenting angle and adjustable splay of both keying modules.

Manufacturer's Description

- 10-degree fixed tenting of keying modules reduces pronation of forearms and wrists
- Adjustable splay (up to 30 degrees) of both keying modules
- Keying modules can be locked at any given splay angle
- Markings in 10 degree increments are embossed on the base, to facilitate reproducible splay settings
- Padded palm supports
- The Solo keyboard can be easily removed from the base for individuals that require greater separation but no tenting
- Available in Black or White

Manufacturer Website: http://www.kinesis-ergo.com/

Instructions and information on installing the accessory kit can be found at: <u>http://www.kinesis-ergo.com/support/manuals.htm</u>

Considerations for Recommending the Kinesis Freestyle Incline Accessory Kit



Before selecting keyboard accessories, read the *General Considerations for Recommending an Alternative Keyboard* on page <u>109</u>.

Pro:

- The large, stable platform secures the keyboard in a mild to moderate tented angle to promote neutral forearm posture
- Degrees of adjustable splay are marked with lines so users can reference their preferred setting and remember how to reproduce it if the setting has been changed
- Prevents the wrists from dropping below the height of the keyboard into an awkward posture
- Hard plastic supports come with a set of attachable, soft palm pads

Con:

- Requires assembly onto the keyboard that may be complex and physically difficult for some (video instructions are available see above)
- Increases the overall keyboard height, which may prevent some workers from keying at or below elbow level
- Removes the capacity for complete split of the keyboard
- Allows only one tenting angle (10 degrees)
- The keyboard cannot be separated (widened) on the platform
- Awkward postures may be imposed if the incline accessory raises the keyboard above a user's elbow height
- If the user needs to move the keyboard, it could separate from the tenting accessories
- Palm supports must be used with this accessory
 - Some users might compress their wrists or hands against the palm supports/pads
 - Users who plant their wrists on the supports/pads will perform repetitive wrist, hand and/or finger motions in awkward postures
 - The palm supports extend the reach to the keyboard



Kinesis Freestyle VIP Tenting Accessory

Listed on UCSC Product List as: Kinesis Freestyle VIP Tenting Accessory; Product Code S9AC720blk Kinesis Freestyle VIP Tenting Accessory for Mac; Product Code S9AC720wht





Manufacturer's Comments

- Ideal replacement for other adjustable ergonomic keyboards, such as those with complicated, unstable, or hard-to-use tenting mechanisms
- For individuals that require tenting, variable splay and/or separation
- For users that want easily reproducible tent settings

Manufacturer's Description

- The VIP (V-Lifter and Integrated Palm Supports) accessories attach easily to the base of the Solo Keyboard allowing quick and reproducible slope settings of 10 and 15 degrees
- Left and Right V-Lifters: the V-lifter quickly and easily alternates the slope of the keyboard from 10 to 15 degrees, positioning your forearms and wrists in a more comfortable position by reducing pronation



- Integrated, padded palm supports ensures that wrists are neutral while resting
- Use with or without the pivot/tether. The pivot tether connects the two keying modules of the Solo keyboard together. Disconnect the pivot tether if greater separation is required
- Provides a highly stable typing platform with no "bounce"
- Specifications include maximum height at 15 degree slope: 3 1/16 inches and maximum height at 10 degree slope: 2 1/2 inches


Manufacturer's Website: http://www.kinesis-ergo.com/

Instructions and information on installing the accessory kit can be found at: <u>http://www.kinesis-ergo.com/support/manuals.htm</u>

Considerations for Recommending the Kinesis Freestyle VIP Tenting Accessory

Before selecting keyboard accessories, read the *General Considerations for Recommending an Alternative Keyboard* on page <u>109</u>.

Pro:

- The two-height tenting V-lifters raise the inside (center) edges of the Freestyle keyboard to promote neutral forearm posture
- The keyboard can be connected or separated to widen the left and right keyboard sections from one another
- Prevents the wrists from dropping below the height of the keyboard into an awkward posture
- Hard plastic supports come with a set of attachable, soft palm pads

- Some users may find the assembly of the V-lifters difficult; although instructions are provided and the website shows a quick video of the general placements
- Awkward postures may be imposed if the incline accessory raises the keyboard above a user's elbow height
- Palm supports must be used with this accessory
 - Some users might compress their wrists or hands against the palm supports/pads
 - Users who plant their wrists on the supports/pads will perform repetitive wrist, hand and/or finger motions in awkward postures
 - The palm supports extend the reach to the keyboard



Kinesis Freestyle V3 Tenting Accessory

Listed on the UCSC Products list as: Kinesis Freestyle V3 Tenting Accessory; Product Code S9AC730blk

Manufacturer's Comments

This keyboard is designed to benefit users in these ways:

- Ideal replacement for other adjustable ergonomic keyboards, such as those with complicated, unstable, or hard-to-use tenting mechanisms
- For individuals that require tenting, variable splay and/or separation without the use of integrated palm supports
- For users that want easily reproducible tent settings

Manufacturer's Description

The V3 accessory attaches easily to the base of the Solo Keyboard allowing quick and reproducible slope settings of 5, 10 and 15 degrees without the use of integrated palm supports. Features include:

- Left and Right V3 V-Lifters: the V3 V-lifter quickly and easily alternates the slope of the keyboard from 5, 10 & 15 degrees positioning your forearms and wrists in a more comfortable position by reducing pronation
- Unlike the VIP, the V3 does not require the installation of palm supports prior to use
- Use with or without the pivot/tether. The pivot tether connects the two keying modules of the Solo keyboard together. Disconnect the pivot tether if greater separation is required
- Provides a highly stable typing platform with no "bounce"
- Specifications include maximum height at 15 degree slope: 3 1/8 inches, maximum height at 10 degree slope: 2 1/2 inches and maximum height at 5 degree slope: 1 7/8 inches

Manufacturer's Website: http://www.kinesis-ergo.com/







Considerations for Recommending the Kinesis Freestyle V3 Tenting Accessory

Before selecting keyboard accessories, read the *General Considerations* for *Recommending an Alternative Keyboard* on page <u>109</u>.

<u>Pro</u>:

- Three tent settings offer very low to moderate elevation of the center portion of the keyboard to approximate various users' neutral forearm postures
- The keyboard can be tethered, or separated to widen the left and right keyboard sections from one another
- Since palm supports are not included, wrists and palms are free from compressing against the palm supports. Moreover, the stronger muscles of the arms and shoulders could be encouraged to do the bulk of the keying action thereby reducing the demands of the smaller muscles of the wrists and hands
- If palm supports are needed, the V3 tenting accessory could be used with a softer support that may be identified through an alternative manufacturer

- Some users may find the assembly and adjustment of the V3 difficult to discern; although instructions are provided
- Awkward postures may be imposed if the incline accessory raises the keyboard above a user's elbow height, although the lower tenting option of this keyboard reduces that possibility
- Some users may plant their wrists or palms on the keying surface, well below the heights of the keys. This would position their wrists and hands in extreme awkward postures



Kinesis Freestyle Ascent Multi-Tent Accessory

Listed on the UCSC Product list as: Kinesis Freestyle Ascent Tenting Accessory; Product Code S9AC740blk

Manufacturer's Comments

- For individuals that require higher tenting angles between 20 & 90 degrees
- For users that need a completely vertical keyboard
- Greatly reduces the awkward and damaging postures (deviation, pronation and extension) that keyboarding creates
- For users that want easily reproducible tent settings

Manufacturer's Description

The new Freestyle Ascent accessory kit provides two multi-angle tenting modules which attach to the underside of the keying modules, plus a linking plate which may be used to connect the two keying modules if desired.

Tenting angles may be independently set for each keying module in the range of 20 to 90 degrees, in 10 degree increments. Left/right separation is limited only by the length of the keyboard's linking cable.

The standard 8" separation is adequate for most users, but the 20" linking cable is recommended for greater flexibility. Keyboards with the 8 inch linking cable may be upgraded to the 20" cable. The Ascent can also be used in conjunction with the optional Freestyle palm supports, most aptly suited for the lower tent settings of 20, 30 and 40 degrees.

Tenting is the elevation of the center portion of your split keyboard. By raising your thumbs, your forearm muscles become relaxed reducing <u>pronation</u>, resulting in significantly improved comfort and blood flow.











Manufacturer's Website: http://www.kinesis-ergo.com/

Considerations for Recommending the Kinesis Freestyle Ascent Multi-Tenting Accessory

Before selecting keyboard accessories, read the *General Considerations for Recommending an Alternative Keyboard* on page <u>109</u>.

<u>Pro</u>:

- A wider range of tent adjustability is offered with this accessory
- The accessory package can include or exclude the palm supports
- The keyboard can be made much wider to improve posture for those with broader shoulders/torsos
- May be appropriate for a rare individual (e.g. with very limited arm mobility) that cannot use a keyboard in a horizontal plane

- Some users may find the assembly of the Freestyle Ascent difficult; although instructions are provided and the website shows a quick video of the general placements
- Awkward postures may be imposed if the incline accessory raises the keyboard above a user's elbow height
- Looking at the keys (as even touch typists occasionally do) with the keyboard highly tented may invoke awkward neck and back postures. Not recommended for sight typists
- Moving the fingers in the horizontal plane to depress keys on a vertical keyboard may feel difficult and awkward



Keyboard Platforms

General Considerations for Recommending a Keyboard Platform

- A keyboard platform can be a good solution for a computer user who needs to use the keyboard and mouse at a level that is lower than the desk level
- A keyboard platform is most appropriate for someone who does not need to sit very close to the main desk while using the computer, since a keyboard platform places the worker several inches farther away from the desk, raising the potential for awkward reaching to items on the desk
- All of the keyboard platforms on the *ErgoCruz Preferred Products List* can accommodate both keyboard and mouse
- When considering which keyboard platform to recommend, answer the following questions:
 - How much space is available for a platform? Measure the width (left to right) of the leg space and the depth (front to back) of the underside of the work surface. Select a platform that is at least 1" smaller in width with a track that is at least ½" smaller in depth than the available space. Note that a platform with a track smaller than 22 inches might not stow completely under the work surface
 - Will the worker be switching between left and right handed mouse use, and/or is this a multi-user workstation?

Make sure the platform makes it easy to change between left and right handed use

• Does the worker need to use the mouse on a surface that is even with or higher than the keyboard surface?

If so, choose a platform whose mousing surface is even with the keyboard surface or can adjust to an equal or higher level

 Does the worker need the mouse extremely close to the keyboard? Consider a one-piece platform that accommodates keyboard and mouse on a single surface



Humanscale 19" Keyboard System w/ 6G Mechanism & Ht-Adj. Mouse Platform

Listed on UCSC product list as:

Humanscale 6G arm, 19" standard platform, 10" high clip mouse; Product Code E66G90091HG







Manufacturer's Comments

Our line of keyboard supports features the 6G, the lightest, most sustainable mechanism of its kind. It utilizes 28% less material than similar mechanisms, weighs only 6.5 pounds – 28% less than similar mechanisms, and is available in a white finish to provide a clean, modern aesthetic look. All of our keyboard and mouse platforms are made of phenolic, a strong, thin (¼") composite that's non-toxic, durable and easy to clean. Humanscale keyboard systems do not allow users to adjust their keyboards into a positive slope (angled toward the user), which Humanscale believes is a high-risk keyboarding position. All Humanscale mechanisms provide stable support for mousing and keyboarding. Alternate track lengths are available upon request.

Humanscale has the only mousing platform that lets users adjust their mousing position in all three dimensions for maximum comfort. With height, depth, lateral and tilt



adjustability, it can be positioned where it's needed for truly custom support. It can also be easily moved from one side of the keyboard to the other for left- or right-handed use.

Manufacturer's Description

- Intuitive height adjustment that requires no locks, levers or controls
- Ultra-thin profile to provide maximum knee clearance
- Raised tilt mechanism to protect the keyboard from collisions with the edge of the desk
- Platform Tilt Adjustment 0° to -15° dial-a-tilt for neutral wrist posture
- Height Adjustment 7 inches (1³/₄" above track to 5¹/₄" below track)
- Base Swivel 360°
- Standard Track Length 21³/₄"
- 900 series platform is designed to support nearly all standard keyboards and to fit most desks.
- Platform is 19" W x 10%" D
- 10" Mouse clip
- 19" Gel palm rest with synthetic leather cover
- Weight: 6.5 pounds
- Exceeds all BIFMA standards
- 15-year 24/7 warranty

Manufacturer Website: http://www.humanscale.com/products/keyboard_systems.cfm

Considerations for Recommending the Humanscale Keyboard System w/ 6G Mechanism, 19" Standard Platform, 10" Height-Adjustable Mouse Platform, & Gel Palm Rest

Before selecting a keyboard platform, read the *General Considerations for Keyboard Platforms* on page <u>145</u>.

Ensure adequate depth to mount the track on the underside of the work surface, and adequate width for the board to stow under the work surface.

<u>Pro</u>:

- Mousing surface can be moved to either right or left side of the keyboard surface without tools
- Mousing surface is adjustable in height, tilt and distance (slides forward and back on side of the keyboard surface)
- Palm rest is easily removable
- Can stow in a leg space approximately 23 inches wide (in this case the mousing surface will need to be swiveled over the keyboard for stowing)



- Additional configurations and components are available (see manufacturer's website), including:
 - A shorter mechanism (6GSM) with an 18" track to accommodate shallow work spaces (at least 18" depth under work surface required). NOTE: 6GW available with 900 and 950 keyboard platforms only
 - A single-surface platform (500 Big Board) to accommodate mouse placement very close to keyboard, as well as easy change from right to left handed mouse use

<u>Con</u>:

- Moving the mousing surface from one side to the other requires completely removing the mousing surface and sliding it onto the other side
- A cramped or small work space may prevent the mousing surface from being used on both sides of the platform
- The separate mousing surface may limit flexibility in placement of the keyboard relative to the mouse.
- The mouse platform may shift when pressure is applied, potentially affecting mouse location and the worker's arm postures



Humanscale 500 Big Board 27" Platform w/ 6G arm

Listed on the UCSC Product list as:

Humanscale 6G arm, 27" big platform, 20"/7" split gel palm support; Product Code E66G500GMP



Manufacturer's Comments

Our line of keyboard supports features the 6G, the lightest, most sustainable mechanism of its kind. It utilizes 28% less material than similar mechanisms, weighs only 6.5 pounds—28% less than similar mechanisms, and is available in a white finish to provide a clean, modern aesthetic look. All of our keyboard and mouse platforms are made of phenolic, a strong, thin ($\frac{1}{4}$ ") composite that's non-toxic, durable and easy to clean. Humanscale keyboard systems do not allow users to adjust their keyboards into a positive slope (angled toward the user), which Humanscale believes is a high-risk keyboarding position. All Humanscale mechanisms provide stable support for mousing and keyboarding. Alternate track lengths are available upon request.

The Humanscale 500 Big Keyboard Tray and Humanscale 550 Big Compact designs ensure that users type and mouse within their neutral reach zone. These boards keep everything on one worksurface rather than use a mousing platform; this keeps a mouse on the same tilt as the keyboard in use.



Manufacturer's Description

- Intuitive height adjustment that requires no locks, levers or controls
- Ultra-thin profile to provide maximum knee clearance
- Raised tilt mechanism to protect the keyboard from collisions with the edge of the desk
- Platform Tilt Adjustment 0° to -15° dial-a-tilt for neutral wrist posture
- Height Adjustment 7 inches (1³/₄" above track to 5¹/₄" below track)
- Base Swivel 360°
- Standard Track Length 21³/₄ "
- Platform is 27" W x 10 %" D
- Split palm support is 20" and 7" gel with synthetic leather cover
- Exceeds all BIFMA standards
- 15-year 24/7 warranty

Manufacturer Website: http://www.humanscale.com/products/keyboard_systems.cfm

Considerations for Recommending the Humanscale 500 Big Board 27" Platform with 6G Arm

Before selecting a keyboard platform, read the *General Considerations for Keyboard Platforms* on page <u>145</u>.

Ensure adequate depth to mount the track on the underside of the work surface, and adequate width for the board to stow under the work surface.

<u>Pro</u>:

- The keyboard and mouse can be positioned anywhere along the keyboard platform and their left and right placements are easily switched
- The mouse and keyboard can be positioned very close to each other
- Same surface keyboard and mouse platform allows natural and effortless posture and motions when alternating between keyboard and mouse tasks
- 27" width provides spacious surface for most keyboards and mice
- Palm rest is split so one or both of the palm rests can be easily removed
- Additional configurations and components are available (see manufacturer's website), including a shorter mechanism (6GSM) with an 18" track to accommodate shallow work spaces (at least 18" depth under work surface required). NOTE: 6GW available with 900 and 950 keyboard platforms only

<u>Con</u>:

• Needs more than 27 inches width to stow the platform underneath a surface



Humanscale 550 Big Compact 25" Platform w/ 6G arm

Listed on the UCSC Products list as:

Humanscale 6G arm, 25" big compact platform, 25" gel palm support; Product Code E66G550G25





Manufacturer's Comments

Our line of keyboard supports features the 6G, the lightest, most sustainable mechanism of its kind. It utilizes 28% less material than similar mechanisms, weighs only 6.5 pounds – 28% less than similar mechanisms, and is available in a white finish to provide a clean, modern aesthetic look. All of our keyboard and mouse platforms are made of phenolic, a strong, thin (¼") composite that's non-toxic, durable and easy to clean. Humanscale keyboard systems do not allow users to adjust their keyboards into a positive slope (angled toward the user), which Humanscale believes is a high-risk keyboarding position. All Humanscale mechanisms provide stable support for mousing and keyboarding. Alternate track lengths are available upon request.

The Humanscale 500 Big Keyboard Tray and Humanscale 550 Big Compact designs ensure that users type and mouse within their neutral reach zone. These boards keep everything on one worksurface rather than use a mousing platform; this keeps a mouse on the same tilt as the keyboard in use.

- Intuitive height adjustment that requires no locks, levers or controls
- Ultra-thin profile to provide maximum knee clearance
- Raised tilt mechanism to protect the keyboard from collisions with the edge of the desk
- Platform Tilt Adjustment 0° to -15° dial-a-tilt for neutral wrist posture
- Height Adjustment 7 inches (1³/₄" above track to 5¹/₄" below track)
- Base Swivel 360°
- Standard Track Length 21³/₄ "
- Platform is 25" W x 10 5⁄8" D



- Single palm support is 25" gel with synthetic leather cover
- Exceeds all BIFMA standards
- 15-year 24/7 warranty

Manufacturer Website: http://www.humanscale.com/products/keyboard_systems.cfm

Considerations for Recommending the Humanscale 550 Big Compact 25" Platform with 6G arm and Gel Palm Support

Before selecting a keyboard platform, read the *General Considerations for Keyboard Platforms* on page <u>145</u>.

Ensure adequate depth to mount the track on the underside of the work surface, and adequate width for the board to stow under the work surface.

Pro:

- The keyboard and mouse can be positioned anywhere along the keyboard platform and their left and right placements are easily switched
- The mouse and keyboard can be positioned very close to each other
- Same surface keyboard and mouse platform allows natural and effortless posture and motions when alternating between keyboard and mouse tasks
- Additional configurations and components are available (see manufacturer's website), including a shorter mechanism (6GSM) with an 18" track to accommodate shallow work spaces (at least 18" depth under work surface required). NOTE: 6GW available with 900 and 950 keyboard platforms only

- Needs more than 25 inches width to stow the platform underneath a surface
- 25 inch wide compact board may feel cramped for some users, particularly if keyboard and/or mouse are larger than standard size
- Ergonomics risks associated with wrist compression, awkward posture and repetitive motion are likely present when mousing with the palm rest attached



Workrite "Advantage-Dual" Keyboard Platform System

Listed on UCSC Product list as:

Workrite Advantage platform w/ dual swivel mouse - 22" track; Product Code E62112-22J

Workrite Advantage platform w/ dual swivel mouse - 17" track; Product Code E62112-17J



Manufacturer's Comments

This keyboard system features our Advantage-Dual platform with two swivel-out mouse surfaces and our Pinnacle 2 Value Arm. Dual mouse platforms enable users to alternate mouse positions, reducing muscle strain. The efficient design of the mouse platforms reduces the incidence of lifting and repositioning the mouse, a factor in repetitive stress injuries.

- Dual swivel-out mouse platforms accommodate left and right-handed mousing and store under keyboard when not in use
- Mouse trap keeps mouse in place
- Mouse platforms slide to adjust to Mouse-Forward position
- Platform includes built-in document holder and cord management
- Removable LeatheRite palm support



- Arm with 17" or 22" nylon glide track (see Considerations below)
- Tilt range -15° to +10°
- Height range: flush to 6" below surface
- 360° swivel for easy positioning and storage
- Fully independent height and angle controls
- Low profile ball bearing track
- No-knob, no-lever Lift-N-Lock™
- Maximum knee clearance
- Optional no positive tilt kit restricts tilt from 0° to -15°, ordered separately
- Available in black only
- Limited lifetime warranty

Manufacturer's website:

http://www.workriteergo.com/products/productmain.asp?FamID=51

Considerations for Recommending the Workrite "Advantage-Dual" Keyboard Platform System

Before selecting a keyboard platform, read the *General Considerations for Keyboard Platforms* on page <u>145</u>.

Ensure adequate depth to mount the track on the underside of the work surface, and adequate width for the board to stow under the work surface.

Pro:

- Dual mousing surfaces allow for mouse use on either side and can be stowed out of the way beneath the keyboard surface
- Palm rest is easily removable
- Platform can stow in a leg space with width as small as 20 inches (in this case mousing surfaces will both need to be swiveled beneath the keyboard for stowing)
- When used with a 22" track, the platform fully stows beneath work surface (requires at least 22" undersurface depth for attaching track)
- When used with a 17" track, accommodates an undersurface depth as shallow as 17.5". (Note that the platform, when used with a 17" track, does not stow completely beneath work surface

- Mousing surfaces swivel such that adjusting the forward/back position also changes the side to side position. This may limit flexibility in mouse placement relative to the keyboard and the worker
- Mousing surfaces are lower than the keyboard surface, leading some workers to use awkward wrist positions



- A cramped or small work space may prevent the mousing surfaces from being used on both sides of the platform
- The mouse attachment hardware may interfere with leg clearance for some seated workers
- The platform, when used with a 17" track, will not stow completely beneath the work surface



Workrite "Banana-Board" Keyboard Platform

Listed on UCSC Product list as:

Workrite Keyboard Tray (Banana Board) - w/ 17" track arm & jel pad; Product Code E62128-17J





Manufacturer's comments

This patented keyboard platform blends functionality with contemporary design. Combined with our adjustable Pinnacle 2 Arm and our low profile ball bearing track, you have the ultimate in comfort and style.

- Mouse platform easily slides from side to side to accommodate left or right-handed mousing
- Features Mouse-Forward[™] design for improved comfort
- Includes built-in document holder and cord management for keyboard and mouse
- Available with optional mouse palm support
- "Mouse-Trap" keeps mouse in place
- Removable palm support on keyboard platform
- Optional JelRite™ foam palm support
- Includes model 3170 Pinnacle 2 arm with 17" low profile ball bearing track



- Tilt range -15° to +10°
- Soft touch ergonomic knob for easy tilt control adjustment
- Dual counterbalance lift-assist springs
- Height range: flush to 6" below surface
- 360° swivel-easy positioning and storage
- Fully independent height and angle controls
- Low profile ball bearing track
- No-knob, no-lever Lift-N-Lock™
- Maximum knee clearance
- Optional no positive tilt kit restricts tilt from 0° to -15°, ordered separately
- Available in black only
- Limited lifetime warranty

Manufacturer's website:

http://www.workriteergo.com/products/productmain.asp?FamID=24

Considerations for Recommending the Workrite "Banana-Board" Keyboard Platform

Before selecting a keyboard platform, read the *General Considerations for Keyboard Platforms* on page <u>145</u>.

Ensure adequate depth to mount the track on the underside of the work surface, and adequate width for the board to stow under the work surface.

<u>Pro</u>:

- Easily allows for change between left and right handed mouse use
- Mousing surface is "forward", or closer to the user compared to the keyboard surface, which decreases awkward reaching for some users
- Palm rest is easily removable
- Platform can stow in a leg space with width as small as 20 inches (in this case mouse will need to be removed from mousing surface for stowing)
- The 17" track accommodates an undersurface depth as shallow as 17.5". (Note that the platform, when used with a 17" track, does not stow completely beneath work surface. However, a deeper track is available check with vendor.)

<u>Con</u>:

- Mousing surface height is fixed and lower than the keyboard surface, leading some workers to use awkward wrist positions
- A cramped or small work space may prevent the mousing surfaces from extending on both sides of the platform
- Mousing surfaces cannot be extended from both sides of the keyboard simultaneously for dual mouse use



- A standard mouse pad may not fit this uniquely-shaped mouse platform
- The platform, when used with a 17" track, will not stow completely beneath the work surface



Workrite "Revo" Keyboard Platform System

Listed on UCSC Product list as:

Workrite Keyboard Tray (Revo) - w/ 22" track arm; Product Code E6222722J, Workrite Keyboard Tray (Revo) - w/ 17" track arm; Product Code E6222717J





Manufacturer's comments

Combined with the Pinnacle 2 Arm this is a popular solution for those who prefer to use the mouse over the 10-key pad, or for users with limited reach. Generous mouse area minimizes reach. Mouse platform tilts independently from keyboard platform. Ultra-Thin platform includes the Optimizer with built-in document holder and integrated cord management.

- Mouse platform easily positioned over 10-key pad or at keyboard level on right or left hand side
- Designed to minimize reach when 10-key pad is not in use
- Features Mouse-Forward design
- Converts from right to left handed mousing without tools
- Integral mouse trap
- Removable LeatheRite palm support
- Generous Mouse Platform over 70 sq. in. of mousing area
- Mouse platform rotates 360°
- Built in paper holder and integrated cord management



- Arm with 17" or 22" ball bearing track (see Considerations below)
- Tilt range -15° to +10°
- Height range: flush to 6" below surface
- 360° swivel–easy positioning and storage
- Fully independent height and angle controls
- Low profile ball bearing track
- No-knob, no-lever Lift-N-Lock™
- Maximum knee clearance
- Optional no positive tilt kit restricts tilt from 0° to -15°, ordered separately
- Available in black only
- Limited lifetime warranty

Manufacturer's website http://www.workriteergo.com/products/systems.asp

Considerations for Recommending the Workrite "Revo" Keyboard Platform System

Before selecting a keyboard platform, read the *General Considerations for Keyboard Platforms* on page <u>145</u>.

Ensure adequate depth to mount the track on the underside of the work surface, and adequate width for the board to stow under the work surface.

Pro:

- Mousing surface can be moved to either right or left side of the keyboard surface without tools
- Mousing surface can be positioned somewhat independently of keyboard surface, including possible placement over the 10-key pad or level with the keyboard surface in a mouse-forward position
- Palm rest is easily removable
- Platform can stow in a leg space with width as small as 25 inches (in this case mousing surface will need to be rotated over the keyboard for stowing)
- When used with a 22" track, the platform fully stows beneath work surface (requires at least 22" undersurface depth for attaching track)
- An additional mousing surface can be ordered and installed to allow for dual mouse use
- Available with a 17" track to accommodate an undersurface depth as shallow as 17.5". (Note that the platform, when used with a 17" track, does not stow completely beneath work surface

<u>Con</u>:



- Moving the mousing surface from one side to the other requires completely removing the mousing surface and attaching it onto the other side (though without tools)
- The separate mousing surface may limit flexibility in placement of the keyboard relative to the mouse
- A cramped or small work space may prevent the mousing surfaces from being used on both sides of the platform
- Height adjustability of the mousing platform is not intuitively clear to some workers
- The platform, when used with a 17" track, will not stow completely beneath the work surface



3M AKT150LE Adjustable Keyboard Tray

Listed on the UCSC Products list as: 3M EZ Adj. Keyboard, 23" track, 24"w x 12"d x 7.25"h; Product Code E6AKT150LE



Manufacturer's Comments

Enjoy the freedom of lever-free height adjustment and unique lateral adjustment, so you can fine tune the keyboard's position even in less than ideal workspace situations. Keyboard tray is compatible with ergonomic keyboards and comes with a lifetime warranty. For corner or straight-on workstations that can accept a 23" track.

- Lever-free lift and lock adjustment for height. Just tilt the platform to release, then un-tilt to lock in place. Tilt adjusts with knob
- Keyboard platform can adjust left and right to fine tune the exact position of the keyboard. Great for situations where there is an obstruction beneath the work



surface forcing the track to be mounted off-center from its ideal location. Simply loosen red knob and adjust

- Gel wrist rests for keyboard and mouse platforms add comfort by minimizing pressure points. Leatherette cover lasts longer than fabric-covered wrist rests and is easier to clean
- Adjustable separate mousing platform mounts left or right and needs no tools to adjust. Platform slides left and right over the keyboard, tilts forward and backward and adjusts up and down to the same level as the keyboard platform. Features 3M[™] Precise[™] Optical Mousing Surface
- Accepts Second Mouse Platform (sold separately)
- Tilt Range: Forward/Backward +10°/-15°
- Swivel Range 360°
- Track Length 23"
- Max Height Above Mounting Surface 4"
- Max Depth Below Mounting Surface 6"
- Min Width Below Mounting Surface 24"
- Min Depth Below Mounting Surface 23.5"
- Fits Corner Workstation
- Lifetime Warranty for platform and 1 year warranty for wrist rest

Manufacturer Website:

http://solutions.3m.com/wps/portal/3M/en_US/ergonomics/home/products/keyboardtray s/AKT150LE/

Considerations for Recommending the 3M AKT150LE Adjustable Keyboard Tray

Before selecting a keyboard platform, read the *General Considerations for Keyboard Platforms* on page <u>145</u>.

Ensure adequate depth to mount the track on the underside of the work surface, and adequate width for the board to stow under the work surface.

<u>Pro</u>:

- The keyboard platform can be adjusted side to side, if needed
- The mouse platform can be mounted and adjusted to either side of the keyboard without tools
- The mouse platform can adjust in angle, side to side and forward and back, separate from the keyboard platform
- An additional mousing surface can be ordered and installed to allow for dual mouse use



- When the mouse palm rest is attached, it poses ergonomics risks associated with wrist compression, awkward posture, forceful pinching and repetitive motion
- The mouse platform mechanism protrudes below the platform along one side of the keyboard platform and might limit knee clearance
- The mouse platform must be removed and remounted to switch between left and right mouse locations
- Adjustability of the mousing platform is not intuitively clear to some workers
- The mouse platform may shift when pressure is applied, potentially affecting mouse location and the worker's arm postures



3M AKT80LE Adjustable Keyboard Tray

Listed on the UCSC Products list as:

3M Knob Adj. Keyboard, 17" track, 24"w x 12"d x 7.25"h, adj. mouse; Product Code E6AKT80LE



Manufacturer's Comments

The AKT80LE gives you the ability to control height and tilt simultaneously, independent of the mouse platform. It's perfect for shallow workstations where mounting depth is at least 17.5". Compatible with ergonomic keyboards. Lifetime warranty.

Manufacturer's Description

- Star-knob adjustment controls height and tilt simultaneously
- Gel wrist rests for keyboard and mouse platforms add comfort by minimizing pressure points. Leatherette cover lasts longer than fabric-covered wrist rests and is easier to clean
- Adjustable separate mousing platform mounts left or right and needs no tools to adjust. Platform slides left and right over the keyboard, tilts forward and backward and adjusts up and down to the same level as the keyboard platform. Features 3M[™] Precise[™] Optical Mousing Surface

Manufacturer Website:

http://solutions.3m.com/wps/portal/3M/en_US/ergonomics/home/products/keyboardtra ys/



Considerations for Recommending the **3M AKT80LE Adjustable Keyboard Tray** Before selecting a keyboard platform, read the *General Considerations for Keyboard Platforms* on page <u>145</u>.

Ensure adequate depth to mount the track on the underside of the work surface, and adequate width for the board to stow under the work surface.

<u>Pro</u>:

- The mousing platform can be mounted and adjusted to either side of the keyboard platform without using tools
- 17 inch track accommodates an undersurface depth as shallow as 17.5" and still allows the platform to be stowed completely underneath the mounting surface
- The mouse platform can adjust in angle, side to side and forward and back, separate from the keyboard platform
- An additional mousing surface can be ordered and installed to allow for dual mouse use

<u>Con</u>:

- The keyboard tray does not fit corner workstations
- The height adjustability is limited
- The height and tilt controls use the same knob which requires more coordination to adjust than using separate mechanisms
- When the mouse palm rest is attached, it poses ergonomics risks associated with wrist compression, awkward posture, forceful pinching and repetitive motion
- Adjustment mechanisms for the mouse platform and the height/tilt control protrude below the platform so could potentially limit knee clearance
- The mouse platform must be removed and remounted to switch between left and right mouse locations
- Adjustability of the mousing platform is not intuitively clear to some workers
- The mouse platform may shift when pressure is applied, potentially affecting mouse location and the worker's arm postures



Steelcase Details – Lift & Lock 19" Platform, Right Mouse

Listed on UCSC product list as:

Steelcase Details Line - LL, 19" Platform, Right Mouse, Gel Palm Rest; Product Code L52319MRGG





Manufacturer's Comments

Suited for a variety of workstation applications including corners, the Lift & Lock platform is ideal for intensive computer user or multi-user workstation. As workstations get smaller, there is less room to push away from the worksurface. Typically workstations now have a 24" deep surface and a 90 degree configuration. Close proximity to the worksurface edge affords easy access to writing surfaces, flat panel monitor arms, phone, filing, etc.

- 5" Arm requires 24" worksurface depth clearance
- Offers 8.3" travel range 2.5" above the track, 5.8" below the track
- Size: 19"W x 9¾"H x ¼"D (9" Diameter compound-swivel mouse surface)
- Weight: 3 lbs
- Platform: 100% recycled Kraft paper content



- Mousing surface: 100% recyclable Nylon and ABS plastic
- Application: use in radius, diagonal or straight workstation configurations
- Details Lift and Lock keyboard mechanism
- Warranty: 10 years
- A minimum of 20" of knee space width is required
- Ideal for multi-user workstations
- Same-plane, compound-swiveling mousing surface
- Standard fixed-height palm rest is 2" wide
- Standard palm rest covers entire front edge of platform
- Mousing surface features Green-Gel mousing palm rest
- Green-Gel Palm Rest is made of waterborne visco-elastic urethane
- Mounting hardware for conventional attachment is included
- Patent-pending integrated mouse retention/wire management

Manufacturer Website:

http://details-worktools.com/products/19-platform-right-mouse-w-green-gel-palm-rest/

Considerations for Recommending the Steelcase Details Line - 19" Platform, Right Mouse, w/ Green-Gel Palm Rest

Before selecting a keyboard platform, read the *General Considerations for Keyboard Platforms* on page <u>145</u>.

Ensure adequate depth to mount the track on the underside of the work surface, and adequate width for the board to stow under the work surface.

<u>Pro</u>:

- Can stow in a leg space as small as 20 inches wide (in this case the mouse will need to be removed from mousing surface for stowing)
- The keyboard track has 8.3" height adjustability, including 2.5" above the track

<u>Con</u>:

- Mousing surface is fixed in height and lower than the keyboard surface, leading some workers to use awkward wrist positions
- The mousing surfaces may be difficult to stabilize
- The mouse cannot be used directly adjacent to the keyboard
- The mouse attachment hardware may interfere with leg clearance for the seated worker



Steelcase Details – Lift & Lock Mechanism, Classic Rect. Keyboard Tray

Listed on UCSC Products list as:

Steelcase Details Line - LL, Classic Rectangular (same surface mousing); Product Code L523CR10PP





Manufacturer's Comments

The Lift & Lock with a classic rectangular keyboard support platform allows for the use of both a keyboard and mouse on the same horizontal surface, and provides exceptional stability.

- 5" Arm requires 24" worksurface depth clearance
- Offers 8.3" travel range 2.5" above the track, 5.8" below the track
- Movable Palm Rest is covered in a washable nylon material
- Thin Profile
- Ideal for computer-intensive user or multi-user workstations
- Integral cable guides for wire management
- Platform surface is steel; mouse surface material is PVC
- Overall Platform dimensions: W27-1/2" x D9-1/2"
- Weight: 8 lbs
- Color: Champagne, Charcoal, or Pewter
- Able to use in straight or corner workstation configuration
- Ambidextrous, integrated, same-plane mousing surface for left- or right-handed mousing
- 10 year warranty
- Product meets or exceeds all applicable ANSI/BIFMA test standards



Manufacturer Website:

http://details-worktools.com/products/classic-rectangular-platform-wpositionable-palm-rest/

Considerations for Recommending the Steelcase Details Line - Lift & Lock, Classic Rectangular (same surface mousing)

Before selecting a keyboard platform, read the *General Considerations for Keyboard Platforms* on page <u>145</u>.

Ensure adequate depth to mount the track on the underside of the work surface, and adequate width for the board to stow under the work surface.

Pro:

- Same surface keyboard and mouse platform allows natural and effortless posture and motions when alternating between keyboard and mouse tasks
- The keyboard and mouse can be positioned anywhere along the keyboard platform and their left and right placements easily switched
- The mouse and keyboard can be positioned very close to each other
- Palm rest can move laterally to open up the mousing surface on either side of the keyboard
- The keyboard platform has 8.3" height adjustability, including 2.5" above the track

<u>Con</u>:

- Needs more than 25 inches width to stow the platform underneath a surface
- Users may find the built-in wrist rest stiff and hard to the touch
- The keyboard platform is thick so some users would not be able to sit at the keyboard with their elbows at a 90-degree or greater angle



Steelcase Details – Lift & Lock Mechanism, Slider Platform

Listed on UCSC Product list as:

Steelcase Details Line - LL, Slider Platform, Deeper Palm Rest; Product Code L523SL10DA



Manufacturer's Description

- Ambidextrous, integrated mousing surfaces adjust for left-handed or right-handed mousing
- Palm rests are height-adjustable from 1/4" to 11/2" above the platform
- Palm rest is deeper than the standard palm rest
- Document slot supports up to 20 sheets of paper for healthy in-line viewing of reference material
- Creates an integrated workstation approach
- Cable management routing clips included
- Size: 20"W x 3"H xD9½D" (8W" x 8"D mouse surface)
- Color: Champagne, Charcoal, or Pewter
- Platform is powder-coated, formed steel. Mouse Surface is injection molded ABS plastic
- Use in straight or corner workstation configurations
- Easy Lift and Lock keyboard mechanism
- Warranty: 10 years
- Requires a minimum 20" knee space
- 5" Arm requires 24" worksurface depth clearance
- Offers 8.3" travel range 2.5" above the track, 5.8" below the track
- Product meets or exceeds all applicable ANSI/BIFMA test standards

Manufacturer Website:

http://details-worktools.com/products/slider-platform/



Considerations for Recommending the Steelcase Details Line – Lift & Lock Mechanism, Slider Platform, Deeper Palm Rest

Before selecting a keyboard platform, read the *General Considerations for Keyboard Platforms* on page <u>145</u>.

Ensure adequate depth to mount the track on the underside of the work surface, and adequate width for the board to stow under the work surface.

<u>Pro</u>:

- Deeper palm rest may feel softer than the standard since a larger surface area may contact the user's palms
- The palm rest is height-adjustable to fit low and tall keyboards
- Can stow in a leg space as small as 20 inches wide (in this case the mouse will need to be removed from mousing surface for stowing)
- Easily allows for change between left and right handed mouse use
- Mousing surface is "forward", or closer to the user compared to the keyboard surface, which decreases awkward reaching for some users

- Mousing surface is fixed and lower than the keyboard surface, leading some workers to use awkward wrist positions
- A cramped or small work space may prevent the mousing surfaces from extending on both sides of the platform
- Mousing surfaces cannot be extended from both sides of the keyboard simultaneously for dual mouse use
- The keyboard platform is thick so some users would not be able to sit at the keyboard with their elbows at a 90-degree or greater angle



Monitor Arms

General Considerations for Recommending a Monitor Arm

- A monitor arm provides adjustability for multiple users at a single workstation
- Monitor arms can be advantageous in limited-space workstations because of their small footprint on the work surface
- Some can adjust lower than can a monitor stand
- Some monitor arms can be configured with additional arm sections for a larger range of adjustability
- Some have laptop mounting options

Questions to ask before recommending a monitor arm:

• Can a height-adjustable monitor <u>stand</u> accommodate the user's needs in terms of adjustability and space?

If so, consider recommending this as a potentially lower cost alternative

Can the monitor arm be mounted on the work surface?

A "through mount" requires a hole (existing or drilled) in the work surface for mounting

A "clamp mount" requires an overhang (of approximately 3-4") on which to clamp the base

Wall mounts and slat mounts are also available for some arms

Does the user need to adjust the monitor from the front?
 If so, select a monitor arm that can be adjusted by grasping the monitor and moving it

If not, you may consider a monitor arm whose height adjusts at its mounting post (at the back of the desk)

- What height range is required?
 Select an arm that can move the monitor through the needed range
- How heavy is/are the monitor(s)?

Select a monitor arm with adequate weight capacity

• How deep is the work surface, and how close does the monitor need to be to the viewer?

Select a monitor arm with adequate reach. The arm must hold the monitor close enough for the viewer to see it easily while sitting with back support and using the keyboard and mouse

A deep or corner computer workstation may require a grommet or through mount and a hole drilled to mount the arm close enough to the user



• Do you have an Apple monitor? Apple monitors require an adapter plate (purchased separately) to fit the "VESA" mount that is standard on most monitor arms



Monitor Arm Quick Comparison Chart

Product	Prod #	Single or Dual Monitor / Notebook	Capacity (Ib)	Reach / depth adjust (in)	Height range (in)	Monitor mounting brackets	Comments
Humanscale M2 Single Monitor Arm, Clamp Mount, Silver, Up to 20lbs	M2CS	Single	20	20	10	VESA 75 & 100 mm standard; larger available	
Humanscale M4 Single Dbl Link Arm, Clamp Mount, Silver, Up to 20lbs	M4SY	Single	5 to 20	27.5	11.5 dynamic; addl. static	VESA 75 & 100 mm standard	
Humanscale M4 Dual Dbl Link Arm, Clamp Mount, Silver, Up to 20lbs	M4ST	Dual	5 to 20 each; combined 40	27.5	11.5 dynamic; addl. static	VESA 75 & 100 mm standard	
Humanscale M4 Single Dbl Link Arm, Clamp, Silver, Notebook Holder	M4B1SAC MSPNH	Single	5 to 20	27.5	11.5 dynamic; addl. static	VESA 75 & 100 mm standard	
Humanscale M8 Single Monitor Arm, Clamp Mount, Silver, Up to 42 lbs	M8CS	Single	8 to 42	22	11.5	VESA 75 & 100 mm standard; larger available	
Humanscale M8 Dual Monitor w/ Crossbar, Clamp Mnt, Silver, Up to 42lbs	M8CSC	Dual	8 to 42	22	11.5		
3M EZ Adjust Dual Monitor Arm, Desk-Mounted (Double Arm)	E6MA220 MB	Dual	Up to 40 lbs combined wt. w/ grommet mount: 5-20 monitor; 2.5-12 notebook	25.875	13		
3M Easy Adjust Monitor Arm for Desk (Single Arm)	E6MA200 MB	Single	5 to 20	25.875	13		
Workrite Single Swing Arm, Clamp Mount, Up to 25lbs	E6SA1000 S	Single	25	23.25	21.5		


Product	Prod #	Single or Dual Monitor / Notebook	Capacity (Ib)	Reach / depth adjust (in)	Height range (in)	Monitor mounting brackets	Comments
Monitor Arm VESA Compatible Plate for Apple Monitor	VESA Adapter Plate						Used for attaching Apple monitor to standard monitor arm mounts
Steelcase Details Line - FYI Monitor Arm Single	FPASING LECC	Single	5 to 20	24	11.5		built-in counterbalance tool
Steelcase Details Line - FYI Dual Monitor Arm Single	FPADUAL	Dual	5 to 20	4.5 to 24	11.5		built-in counterbalance tool
Steelcase Details Line - Eyesite Single Monitor Arm	FPAC1CC	Single	20	16	7.5		 (1) Extended column for 17- 19" monitors increases vertical adjustment range to 12.5 (2) Supports 30 lb monitors in 16:9 format
Steelcase Details Line - Eyesite Dual Monitor Arm	FPAC2CC	Dual	50 total (2x25#)	13	7.5		 (1) Extended column for 17- 19" monitors increases vertical adjustment range to 12.5 (2) Supports 30 lb monitors in 16:9 format
Steelcase Details Line - Pole Mount Bolt Through Dual Arm	CFDHA & CFSPTM	Dual	5 to 35 per monitor; up to 70 combined	14	10		Can fold away into 3" deep space



Humanscale M2CS Monitor Arm

Listed on UCSC Product list as:

Humanscale M2 Single Monitor Arm, Clamp Mount, Silver, Up to 20lbs; Product Code M2CS



Manufacturer's Comments

Offering all the benefits of a traditional dynamic monitor arm – with none of the shortcomings – the M2 redefines high-performance monitor arms. Current-generation monitor arms utilize a bulky, failure-prone gas cylinder to support the weight of the monitor. The M2 instead uses an innovative mechanical spring to achieve exceptional performance and durability in a lightweight, ultra-thin design.

Manufacturer's Description

- Weight limit: 20 pounds
- Arm reach: 20"
- Height adjustment range: 10"
- Long-lasting mechanical spring
- Slimmest profile available for fully articulating arm
- 52% recycled content and 99% recyclable
- Interchangeable mounting options attach to a variety of work surfaces
- Removable 180° stop protects walls and panels
- 15-year 24/7 warranty

Manufacturer's website: http://humanscale.com/products/product_detail.cfm?group=M2



Considerations for Recommending the Humanscale M2CS Flat Panel Monitor Arm

Before recommending a monitor arm, read the *General Considerations for Recommending a Monitor Arm* on page <u>173</u>.

<u>Pro</u>:

- Lightweight monitor arm best used on a rectangular work surface no deeper than 24" (unless alternate mounting option used)
- Other configurations, including through mount and wall mount, are available from Humanscale. See vendor for information

Con:

- Arm with clamp mount may be too short to adjust close enough for some users with deep work surfaces (but other models and configurations can be ordered)
- Arm moves monitor laterally when pushed back toward the wall
- Alternative configurations may be difficult to select properly without vendor assistance



Humanscale M4 Monitor Arms

Listed on UCSC Product list as:

- Humanscale M4 Single Dbl Link Arm, Clamp Mount, Silver, Up to 20lbs; Product Code M4SY
- Humanscale M4 Dual Dbl Link Arm, Clamp Mount, Silver, Up to 20lbs; Product Code M4ST
- Humanscale M4 Single Dbl Link Arm, Clamp, Silver, Notebook Holder; Product Code M4B1SACMSPNH



M4S-Y (above): Top-mounted arm bracket, adjustable double-link arm, two-piece low profile clamp mount with slim post, accommodates one monitor 5-20 pounds.



M4S-T (above): Bracket-mounted arms, two adjustable double-link arms, two-piece heavy duty clamp mount, standard post, accommodates two monitors 5-20 pounds each.





M4B1SACMSPNH (left): Bracket-mounted adjustable doublelink arm, heavy duty two-piece clamp mount, standard post, notebook holder.

Manufacturer's Comments

Featuring effortless height and depth adjustability, Humanscale's new M4 adds impressive functionality to Humanscale's already broad range of flat panel monitor arm offerings. The adjustable arm allows users to easily customize the height, angle, depth and viewing position of their flat panel monitor for maximum benefit. The M4 offers 14" of height adjustment (7" up and 7" down from center). When the monitor is not in use, the arm can be folded flat, taking up only a few inches of depth while still retaining the ability to be moved vertically. To accommodate virtually any monitor, the M4 has a counterbalance adjustment to perfectly balance any monitors weighing between 5 and 20 lbs. The die-cast aluminum used in the M4 is 100% recycled and 100% recyclable. Over 80% of the M4 by weight is made of recycled material and 95% is recyclable. The M4 is designed to long outlast the user's current flat panel monitor and can easily accommodate new monitor sizes. The monitor arm comes with a 10-year warranty on the gas cylinder and a lifetime warranty on all other parts.

Manufacturer's Description

- Extended 14" range of finger-tip height adjustment
- Accommodates monitors weighing from 5 to 20 lbs.
- Small desktop footprint maximizes usable space
- Environmentally-friendly: Made from 80% recycled and 95% recyclable material
- 10-year warranty on gas cylinder lifetime warranty on all other components
- Adjusts effortlessly in all directions to provide ideal monitor positioning for different tasks or users
- Installs quickly and easily through grommets or onto desk edge
- Comes standard with both 75mm and 100mm VESA mounting brackets
- 360° monitor rotation for portrait or landscape viewing
- 60° range of lateral and vertical monitor tilt for additional viewing adjustability
- Available post-mounted (through-desk, or clamp-on), or wall mounted

Manufacturer's Website:http://www.humanscale.com/products/msupport_m4.cfm

Considerations for Recommending Humanscale M4 Flat Panel Monitor Arms



Before recommending a monitor arm, read the *General Considerations for Recommending a Monitor Arm* on page <u>173</u>.

<u>Pro</u>:

- These arms adjust easily from the front with gas lift in the arm the user grasps the monitor and moves it
- Length of the arms is suitable for deep, shallow and corner workstations
- Arms fold straight back to place monitor close to the wall if needed
- Includes built-in counter balance tool
- Other configurations, including wall mount, are available from Humanscale. See vendor for information

<u>Con</u>:

• Alternative configurations are difficult to select properly without vendor assistance



Humanscale M8CS Monitor Arms

Listed on UCSC Product list as:

Humanscale M8 Single Monitor Arm, Clamp Mount, Silver, Up to 42 lbs; Product Code M8CS

Humanscale M8 Dual Monitor w/ Crossbar, Clamp Mnt., Silver, Up to 42lbs; Product Code M8CSC



M8CS



M8CSC (with crossbar)

Manufacturer's Comments

Single Arm: Through its unique design, the M8 Monitor Arm accommodates the widest range of monitors available today – any monitor up to 42 pounds. Combining rugged performance with sleek aesthetics, the M8 is the ideal solution for heavy monitor applications or any other environment with a flat panel monitor.

Dual Arm: The M8's high weight capacity allows it to easily accommodate dual-monitor applications. Using an optional crossbar, the M8 supports two monitors – each weighing up to 20 pounds – arranged side-by-side. With a built-in fine-tune adjustor, each monitor can be adjusted for perfect alignment thereby creating easy viewing and a smooth aesthetic. Monitors mounted to the crossbar adjust simultaneously, allowing the user to easily reposition the entire configuration and improving the ergonomics of multiple-user workstations.

Manufacturer's Description

- Weight limit: 8 to 42 pounds
- Depth adjustment range: 22"
- Reach limit: 20.70"



- Dynamic height adjustment range: 11.5"; additional static range
- 75mm and 100mm VESA brackets standard (larger sizes available)
- Maximum dual monitor separation: 24" center to center
- Rugged, high-capacity construction supports dual-monitor applications with optional crossbar
- Built-in fine-tune adjustment ensures that double monitors line up perfectly
- 180° stop mechanism prevents wall damage from over-rotation
- VESA Plate stores 2 hex keys for instant access to adjustment tools
- Multiple mounting options: through, desk clamp or fixed wall mount

Manufacturer's website: http://humanscale.com/products/product_detail.cfm?group=m8

Considerations for Recommending Humanscale M8 Flat Panel Monitor Arms

Before recommending a monitor arm, read the *General Considerations for Recommending a Monitor Arm* on page <u>173</u>.

<u>Pro</u>:

- Highest weight capacity for a single monitor
- User can adjust height and distance from the front
- Other configurations, including wall mount, are available from Humanscale. See vendor for information

Con:

- Arms with clamp mount may be too short to adjust close enough for some users with deep work surfaces (but other models and configurations can be ordered)
- Alternative configurations may be difficult to select properly without vendor assistance



3M Easy Adjust Dual Monitor Arm

Listed on UCSC Product list as: 3M EZ Adjust Dual Monitor Arm, Desk-Mounted (Double Arm); Product Code E6MA220MB





Manufacturer's Comments

Free up desktop space and add your notebook screen to your LCD monitor to double the size of your computer's display. Or mount two LCD monitors side by side. Highly adjustable arms move up, down, forward and back with just a touch.

Manufacturer's Description

- Weight limit: 5-20 pounds for monitor; 2.5-12 pounds for notebook. Maximum combined weight 40 pounds with grommet mount
- Reach limit: 25.875"
- Height range: 13"
- 75mm and 100mm VESA brackets standard
- Monitor can rotate to portrait or landscape
- Swivels 180° and tilts forward and back 80° for optimal ergonomic positioning
- Clamp or grommet mount hardware included for desks up to 1-7/8" thick
- Includes attachment system for docking stations for quick and easy notebook connectivity
- 5 Year warranty

Manufacturer's Website:

http://solutions.3m.com/wps/portal/3M/en_US/ergonomics/home/products/DisplayMount ingSolutions/MA220MB/



Considerations for Recommending the 3M Easy Adjust Dual Monitor Arm

Before recommending a monitor arm, read the *General Considerations for Recommending a Monitor Arm* on page <u>173</u>.

Pro:

- Adjusts easily from the front; user grasps the monitor and moves it
- Additional height range is available by adjusting at the mounting post
- Length of arm with clamp mount is suitable for rectangular workstations 24" deep or possibly deeper depending on user's optimal viewing distance (may be grommet mounted closer if necessary for deeper surfaces)

Con:

- Dual arms are mounted one above the other on a shared post, potentially limiting the overall height range of each
- Side-by-side monitors do not adjust together as a unit
- Fewer configurations available than with some other brands



3M Easy Adjust Monitor Arm, Desk-Mounted

Listed on UCSC Product list as:

3M Easy Adjust Monitor Arm for Desk (Single Arm); Product Code E6MA200MB



Manufacturer's Comments

Free up space on your desk and easily move your LCD monitor into the best ergonomic position. Highly adjustable arm moves up, down, forward and back with just a touch.

Manufacturer's Description

- Weight limit: 5-20 pounds
- Reach limit: 25.875"
- Height range: 13"
- 75mm and 100mm VESA brackets standard
- Monitor can rotate to portrait or landscape
- Swivels 180° and tilts forward and back 80° for optimal ergonomic positioning
- Clamp or grommet mount hardware included for desks up to 1-7/8" thick
- 5 Year warranty

Manufacturer's Website:

http://solutions.3m.com/wps/portal/3M/en_US/ergonomics/home/products/DisplayMount ingSolutions/MA200MB/

Considerations for Recommending the 3M Easy Adjust Single Monitor Arm



Before recommending a monitor arm, read the *General Considerations for Recommending a Monitor Arm* on page <u>173</u>.

Pro:

- Adjusts easily from the front; user grasps the monitor and moves it
- Additional height range is available by adjusting at the mounting post
- Length of arm with clamp mount is suitable for rectangular workstations 24" deep or possibly deeper depending on user's optimal viewing distance (may be grommet mounted closer if necessary for deeper surfaces)
- Relatively low cost solution with fairly good reach limit

<u>Con</u>:

• Fewer configurations are available than with some other monitor arms



Workrite SwingArm

Listed on UCSC Product list as: Workrite Single Swing Arm, Clamp Mount, Up to 25lbs.; Product Code E6SA1000S



Manufacturer's Comments

Create a healthier, safer, more comfortable work environment. SwingArm allows users to easily adjust monitor height, focal distance and tilt angle and stores easily to the rear of the worksurface. SwingArm's 21.5" height range is best-in-class. It also leads in reach adjustability and supports monitors up to 25 lbs. Ball swivel allows users to easily set viewing angle and monitor rotation.

Manufacturer's Description

- Weight limit: 25 lbs
- Reach limit: 23.25"
- Height range: 21.5"
- 75mm and 100mm VESA brackets standard
- Mounts to a variety of surfaces
- Includes clamp and grommet style mounts, for use when mounting to a worksurface up to 2.125" thick
- 10-year limited warranty



Manufacturer's Website:

http://www.workriteergo.com/products/productmain.asp?famid=85

Considerations for Recommending the WorkRite SwingArm Monitor Arm

Before recommending a monitor arm, read the *General Considerations for Recommending a Monitor Arm* on page <u>173</u>.

Pro:

- Adjusts easily from the front; user grasps the monitor and moves it
- Includes hardware for both clamp and grommet mounts
- Length of arm with clamp mount is suitable for rectangular workstations 24" deep or possibly deeper depending on user's optimal viewing distance (may be grommet mounted closer if necessary for deeper surfaces)
- Relatively low cost solution with good reach
- Extended model has 30.25" reach. Check with vendor
- Dual model available (holds two monitors). Check with vendor

- Some users have noticed a tendency for the ball swivel to loosen, requiring occasional tightening with a Phillips head screwdriver
- Very lightweight monitors may require added weight to avoid undesired ascent of monitor
- Fewer configurations are available than with some monitor arm styles



Steelcase FYI Flat Panel Single-Monitor Arm

Listed on UCSC Product list as: Steelcase Monitor Arm; Product Code FPASINGLECC



Manufacturer's Comments

Supports flat panel monitors in a workstation environment. Particularly important to users in workstation environments which offer limited space and/or require ease of adjustment for more than one viewer. Reduces eye strain and promotes stress-free movement.

Manufacturer's Description

- Built-in counter-balance tool so the user can easily counter-balance the monitor
- Integrated cable management
- Quick-Connect[™] capability for easy connection (or disconnection) of a monitor
- Additional screw included to provide monitor security
- An anti-dislodgment feature is included
- Rotation allows for landscape or portrait viewing of monitors
- Tilt mechanism operates through a range of 20° backward tilt and 30° forward tilt
- Ships standard with both the 75mm and 100mm VESA compliant mounting plates
- Warranty: 10 years on arm and mounting methods, 5 years on gas cylinder
- Weight: 13.5 lbs. (including Desk-Clamp bracket)
- Height adjustable a total of 11.5". Has 24" of focal extension. Has 180 degree rotation around the base axis, 360 degree rotation around the lower arm axis, and 160 degrees of pan adjustability
- Supports monitor weights 5 to 20 lbs



Manufacturer's Website

http://www.steelcase.com/en/products/category/worktools/computer/flat-panel-monitorarm/Pages/Overview.aspx

Considerations for Recommending the Steelcase FYI Flat Panel Single-Monitor Arm

Before recommending a monitor arm, read the *General Considerations for Recommending a Monitor Arm* on page <u>173</u>.

Pro:

- Adjusts easily from the front; user grasps the monitor and moves it
- Includes built-in counter balance tool
- Available with C-clamp bracket or through-mount for attaching to the desk

<u>Con</u>:

• Arm may be too short to adjust close enough for some users with deep work surfaces



Steelcase FYI-2® Dual Flat Panel Monitor Arm

Listed on UCSC Product list as: Steelcase Details Line - FYI Dual Monitor Arm; Product Code FPADUAL



Manufacturer's Comments

The Steelcase FYI-2 supports the use of two flat panel monitors within a single workstation with ease of positioning each flat panel monitor across a broad range of adjustment. It allows effortless adjustment of height range and viewing angle changes, reduces eye strain, and promotes stress-free movement.

Manufacturer's Description

- Weight limit 5 to 20 lbs each monitor
- Reach limit 24"
- Height range 11.5"
- 75 mm and 100 mm VESA brackets standard
- Built-in counter-balance tool allows the user to easily counter-balance the monitor
- Additional screw included to provide monitor security
- An anti-dislodgment feature is included
- Rotation allows for landscape or portrait viewing of monitors
- Tilt mechanism operates through a range of 20° backward tilt and 30° forward tilt
- Warranty: 10 years on arm and mounting methods, 5 years on gas cylinder

Manufacturer's Website:

http://www.steelcase.com/en/products/category/worktools/computer/flat-panel-monitorarm/Pages/Overview.aspx



Considerations for Recommending the Steelcase FYI Dual Flat Panel Monitor Arm

Before recommending a monitor arm, read the *General Considerations for Recommending a Monitor Arm* on page <u>173</u>.

<u>Pro</u>:

- Adjusts easily from the front; user grasps the monitor and moves it
- Includes built-in counter balance tool
- Available with C-clamp bracket or through-mount for attaching to the desk

Con:

• Arm may be too short to adjust close enough for some users with deep work surfaces (but could be mounted closer with through-mount and hole drilled in desk)



Steelcase Eyesite™ Single and Dual Display Supports

Listed on UCSC Product list as:

Steelcase Details Line - Eyesite Single Monitor Arm; Product Code FPAC1CC Steelcase Details Line - Evesite Dual Monitor Arm; Product Code FPAC2CC





Manufacturer's Comments

A flat panel monitor support arm that lets you adjust your monitor to where it's comfortable for you, rather than forcing you to adjust to a fixed position. When using multiple monitors, Eyesite will maintain the same focal distance for each - one screen to another – regardless of adjustments. Evesite also tucks neatly against a panel or wall so valuable work space is re-claimed right where it's needed most: directly in front of you.

Manufacturer's Description

- Weight limit 20 lbs on single display support •
- Weight limit 25 lbs each monitor on double display support •
- Horizontal reach range 16" for single display support; 13" for dual display support •
- Height range 7.5" standard column (for 20"+ screens): 12.5" extended column (for • 17-19" screens)
- 75 mm and 100 mm VESA brackets standard
- Multiple mounting options
- Warranty: 12 years
- Certification: Silver Cradle to Cradle and BIFMA Level 1
- Sustainability: Recycled content; recyclability 99% •

Manufacturer's Website:

http://details-worktools.com/products/evesite-single-display-support/ http://details-worktools.com/products/eyesite-dual-display-support/



Considerations for Recommending the Steelcase Eyesite™ Display Supports

Before recommending a monitor arm, read the *General Considerations for Recommending a Monitor Arm* on page <u>173</u>.

<u>Pro</u>:

- May be appropriate for shallow work surface
- Dual support angles monitors in toward the user and allows for adjusting both monitors as a unit

Con:

- Limited horizontal adjustability; device with clamp mount may be too short to adjust close enough for many users (but could be mounted closer with through-mount and hole drilled in desk)
- Horizontal distance change may require loosening and tightening nuts with an (included) Allen wrench
- Height and tilt changes require adjustment of the support behind the monitor using an (included) Allen wrench



Steelcase CF Series Monitor Arm – Pole-Mount Double-Arm

Listed on UCSC Product list as:

Steelcase Details Line – Pole Mount Bolt-Through Dual Arm; Product Code CFDHA & CFSPTM



Manufacturer's Comments

As flat panel displays become wider and lighter there is an ever-increasing need for a flexible flat panel support. Here it is.

Manufacturer's Description

- Each arm supports monitors weighing 5-35 lbs.
- 14" focal adjustment range from pole
- 12" High Pole
- 10" height adjustment (based on application)
- Arm in horizontal orientation
- Cable management included
- Will fold into approximately 3" of space

Note: Item CFDHA (Pole Mount, Double Arm, and Bracket) and item CFSPTM (Through Mount) are ordered separately.

Manufacturer's Website:

http://details-worktools.com/products/cf-series-flat-panel-monitor-arm-pole-mount-double-arm/



<u>Considerations for Recommending the Steelcase CF Series Flat Panel Monitor Arm -</u> <u>Pole Mount Double Arm with Through Mount Bracket</u>

Before recommending a monitor arm, read the *General Considerations for Recommending a Monitor Arm* on page <u>173</u>.

Pro:

- Highest total weight capacity: 70 pounds overall (35 pounds each monitor)
- Dual support keeps both monitors at same level, which may be an advantage for two monitors of same size

- Limited forward/back adjustability may require mounting the arm through desk close to user, which could limit desk space available for other items
- Height changes require adjustment at the pole support behind the monitors
- Limited flexibility for using two different sized monitors



VESA Adapter Bracket for Apple Monitor

Listed on UCSC Product list as:

Monitor Arm VESA Compatible Plate for Apple Monitor; Product Code VESA Adapter Plate



Manufacturer's Comments

This VESA Mount Adapter Kit allows your 24-inch or 27-inch iMac computer or 24-inch or 27-inch LED Cinema Display to be used with a variety of alternate mounting solutions such as wall mounts and zero footprint articulating arms based on the VESA flat panel mounting interface (FPMI). With a tool in this kit, you can remove the iMac or display stand and attach the VESA Mount Adapter. Then connect any VESA-compliant mounting solution with a 100mm x 100mm attachment. With the VESA Mount Adapter attached, the 24-inch or 27-inch iMac and 24-inch or 27-inch LED Cinema Display complies with the VESA MIS-D, 100, C version specification.

Manufacturer's Description

- Works with the following models:
 - 24-inch iMac (aluminum and glass)
 - 27-inch iMac
 - 24-inch LED Cinema Display
 - 27-inch LED Cinema Display

Note: Wall mount or articulating arm is not included

Manufacturer's Website:

http://store.apple.com/us/product/MC772ZM/A?mco=MTY3ODQ5OTY





Footrests

General Considerations for Recommending a Footrest

- A footrest is most useful for the individual who needs to sit with his or her chair seat at a level that does not allow the feet to rest firmly on the floor
- A secondary use for a footrest is for an individual who can easily reach the floor but needs an alternate placement for the feet. Examples:
 - Individual tends to slide forward in the chair (and the chair is adjusted properly)
 - Individual feels that his or her back is better supported with use of a footrest
- When considering whether to recommend a footrest at a standard height desk, and which one to recommend, answer the following questions

For a standard height workstation:

• Is there another solution that would enable the worker to sit with his or her feet on the floor and still access the work tools at the proper level (usually at or near elbow level)?

Example: an adjustable keyboard/mouse platform may position the keyboard and mouse lower (at or near the worker's relaxed elbow level) while the worker is sitting with the feet supported on the floor

- Does the worker need to sit at a level that does not allow the feet to rest firmly on the floor (usually due to fixed work surface height)?
 If so, a footrest is needed
- Does the worker need an alternate placement for the feet (in addition to flat on the floor)?

If so, a footrest may be helpful

For a counter-height workstation and using a stool-height chair, additional foot support is needed even if the chair has a foot ring. Answer the following:

- How high should the foot support be? Measure how far the individual's feet are from the floor when positioned as though the feet were supported
- How much support is needed? Select an industrial footrest, if needed, for heavy use
- Does the user prefer stationary or moveable support? Unless heavy support is needed, select from moveable or fixed-angle models according to user preference
- Advise users not to stand on footrests as these devices are not intended to support full body weight



Part of Name	Dec. heat #	Platform Size	Height		
Product Name	Product #	(W x D)	Range	Angle	
Workrite Adj. Footrest	E6215	23" x 11"	4"-15"	Moveable angle	
BioFit Footrest 20"w	E6FS-1	20" x 11"	3"-11"	Fixed angle	
BioFit Footrest 12"w	E6FS-2	12" x 11"	3"-11"	Fixed angle	
Kelly Footrest	E6101045	17.75" x 14"	4" fixed	Adjustable angle	
Details Footrest	CFTR	18" x 12"	2"-6"	Angle change obligatory with height change	
Ergomart Adj. Footrest 20"w FR-L-2016		20" x 12"	4"-16"	Fixed angle	
Ergomart Adj. Footrest 12"w	FR-S-1216	12" x 12"	4"-16"	Fixed angle	

Footrest Quick Comparison Chart



WorkRite Height and Angle FootRester

Listed on UCSC product list as: Workrite Adj. Footrest 23" Wide / Height Adjusts 4" – 15"h; Product Code E6215



Manufacturer's Description

- Easy height adjustment locks into place automatically
- Platform's fluid rocking motion automatically adjusts with changes in body position
- Contemporary charcoal finish
- Extra-wide platform measures 23" wide by 11" deep
- Can be adjusted from 4" to 15" above the floor in ³/₄" increments.
- A heavy gauge steel frame and 3/8" thick composite plastic can take use and abuse
- Non-skid strips available on quotation

Manufacturer Website:

http://www.workriteergo.com/products/productmain.asp?FamID=25#

Considerations for Recommending the WorkRite Height and Angle FootRester

Before selecting a footrest, read the *General Considerations for Recommending a Footrest* on page 200.

Pro:



- High footrest suitable for use at counter-height workstation with stool-height chair
- Height is easier to adjust than that of other high footrests
- Our highest adjusting footrest
- User can readily change the tilt with his or her feet
- 23" wide footrest provides good width in large spaces

- Tilt is not fixed; it is always moveable
- Many users prefer and/or receive better support from an unmoving footrest
- User may be tempted to misuse a high footrest by stepping on it while getting in and out of the chair and it is not intended for this use. The tilting design makes this more hazardous than would a stationary design



BioFit FS Series Footrests

Listed on UCSC product list as: BioFit Footrest 20"Wide / Height Adjusts 3" - 11" h; Product Code E6FS-1 BioFit Footrest 12" "Wide / Height Adjusts 3" - 11" h; Product Code E6FS-2





FS-2

Manufacturer's Description

- Ergonomic Footrests promote comfort from head-to-toe
- Free-standing adjustable footrests provide workers foot support when their chairs cannot, relieving stress on the underside of their thighs
- FS ergonomic footrests feature rectangular steel frames, are available in two platform widths, and adjust from 3 to 11 inches in height
- Adjustable platform of 14 gauge sheet steel features rack and pin adjustment which can be set in 1" increments from 3" to 11" above the floor
- Platform includes a non-skid tread

Manufacturer Website: http://biofitoffice.com/products/office/footrests.html

Considerations for Recommending the BioFit FS Series Footrests

Before selecting a footrest, read the *General Considerations for Recommending a Footrest* on page <u>200</u>.

<u>Pro</u>:

- These footrests are very sturdy (though not intended for standing on)
- High footrest is suitable for use at some counter-height workstations with stoolheight chairs yet adjusts low enough to use with standard height desks and chairs
- Fixed angle is stable and comfortable for most users



- Open-fronted base allows chair casters to roll under platform and user to sit close to footrest
- 12" wide (E6FS-2) footrest is compact and fits in smaller spaces
- 20" wide (E6FS-1) footrest provides good width in larger spaces

- Some users may prefer moveable foot support
- Rack and pin height adjustment is cumbersome and may be difficult for some users, especially with the larger and heavier (E6F-1) footrest (however, this lends to its stability)
- Does not adjust as high as some other high footrests
- User may be tempted to misuse a high footrest by stepping on it while getting in and out of the chair and it is not intended for this use



Footrests

Kelly Adjustable Footrest

Listed on UCSC product list as Kelly Adj. Footrest 18"w x 14" d 4"h / Tilt; Product Code E6101045



Manufacturer's Comments

KellyREST Brand extra wide adjustable footrest helps relieve lower back strain and helps correct your posture when working at the desk. Easily adjust to various angles and heights by using foot pressure. Ergo ridges massage your feet when you take your shoes off. Light weight, non skid base, made of sturdy plastic. Some assembly required. Product Dimensions (HxWxD): 4"H x 17.75"W x 14"D

Manufacturer Website: http://kellyrest.com/store/page5.html

Considerations for Recommending the Kelly Adjustable Footrest

Before selecting a footrest, read the *General Considerations* for *Recommending a Footrest* on page <u>200</u>.

Pro:

- Simple, budget-priced footrest may be suitable for use at a standard height or slightly higher desk
- Adjustable angle



• The 4" fixed height may be too high for those who need only slightly elevated foot support at a standard height desk



Details Footrest

Listed on UCSC product list as: Steelcase Details Line - Foot Rest; Product Code CFTR



Manufacturer's Comments

Health experts agree that muscle tension and stress can be minimized by good posture. The Details Footrest features a curved surface along which you can position your feet in several different ways plus four height adjustment options. When you change positions or wear shoes with different heel height, simply rotate the adjustment arms forward to raise or lower your Footrest to comfort. These important features help you sit or stand more comfortably while performing work-related tasks.

Manufacturer's Description

- Promotes good seated posture and blood circulation
- Curved, non-skid surface
- Four height positions (2" to 6" off floor)
- Counter pressure-formed styrene, steel, and vinyl
- Fully assembled

Manufacturer Website: http://details-worktools.com/products/footrest/

Considerations for Recommending the Details Footrest



Before selecting a footrest, read the *General Considerations for Recommending a Footrest* on page 200.

<u>Pro</u>:

- A stable, simple-to-adjust footrest that may be suitable for use at a standard height desk
- Platform angle is most appropriate at lower two height adjustments
- At 2", this is the lowest adjusting footrest, suitable for individuals who need only slightly elevated foot support

- Some users may prefer moveable foot support
- At greater height adjustments the platform angle is accentuated and may be uncomfortable



Ergomart Height Adjustable Industrial Footrests

Listed on UCSC product list as:

Ergomart Adj. Footrest 20"w / Height Adjusts 16" h; Product Code FR-L-2016 Ergomart Adj. Footrest 12"w / Height Adjusts 16" h; Product Code FR-S-1216





FR-S-1216

Manufacturer's Comments

Our industrial height adjustable footrests are built tough to take abuse in industrial environments. They are all steel with an abrasion resistant polyurethane coating on the non-slip footplate. These height-adjustable footrests have large non-slip rubber feet and come in two sizes.

Manufacturer's Description

- Heavy Duty all-steel construction
- Finished with slip-resistant polyurethane coating
- Adjustable footrests set at increments of one inch
- Set as low as 4 inches or as high as 16 inches
- FR-S-1216: 12" deep by 12" wide platform
- FR-L-2016: 12" deep by 20" wide platform
- Large rubber feet won't damage floor
- Three year limited warranty

Manufacturer Website: http://Ergomart.com/footrests/FRL-2016-Footrest-dtl.htm



Considerations for Recommending the Ergomart Footrests

Before selecting a footrest, read the *General Considerations for Recommending a Footrest* on page 200.

<u>Pro</u>:

- These footrests are very sturdy (though not intended for standing on)
- High footrest is suitable for use at counter-height workstation with stool-height chair yet adjusts fairly low for some users to be able to use with a standard height or slightly higher desk and chair
- Fixed angle is stable and comfortable for most users

- Some users may prefer moveable foot support
- Rail across the front of the base prevents chair casters from rolling under platform, limiting user positioning
- User may be tempted to misuse a high footrest by stepping on it while getting in and out of the chair and it is not intended for this use


Telephone Accessories

General Considerations for Recommending Headsets or Shoulder Rests

Shoulder Rests

- A shoulder rest is a device that attaches to the telephone handset. It helps the user prop the telephone on the top of the shoulder to keep the hands free for multitasking while on the phone
- A shoulder rest is not recommended for long or frequent phone use. It is considered a distant second choice to a telephone headset

Pros and Cons of shoulder rests include the following:

Pro:

- Easy to install
- Does not take up space on the desk
- Needs no technical support (no complicated parts or technology)
- Durable

<u>Con</u>:

- May encourage user to prop the phone on the shoulder, which is not recommended
- Adds weight to the hand set, which could cause malfunction in an automatic handset lifter (used in conjunction with a headset)

Headsets:

- A headset can be an excellent solution for a worker with frequent or long duration of telephone use, and/or who multitasks while on the phone
- General guidelines suggest recommending a headset for an individual if any of the following are true:
 - Uses the telephone for more than 2 hours a day
 - Uses the telephone for more than 10 minutes at a time
 - Has neck discomfort
 - Must use the hands for other tasks while on the telephone
- A corded headset may be appropriate for a worker who stays at the desk while using the telephone
- A wireless headset may be appropriate for a worker who must move away from the desk while using the telephone



• A handset lifter for a wireless headset may be appropriate for someone who must answer or end a call while away from the desk, or who does not have enough space to keep the telephone within close reach. [Note that the user will still have to handle the phone to initiate calls (dialing).]

Pros and Cons of wireless headsets include the following:

<u>Pro</u>:

- Wireless technology enables the user to move about the office (or out of the office) while on the telephone
- Wireless feature may contribute to reduction of clutter on the desk, leaving the immediate area free for worker to handle items in the nearby work space
- User can control minor and major volume for both speaking and listening
- Handset lifter enables user to answer and end calls remotely

Con:

- Headset base may take up more space on the desk than a corded headset's equipment (such as amplifier)
- Multiple volume controls are not intuitively understood, requiring careful reading of instructions
- Troubleshooting can be complicated
- Headset must be charged regularly
- Battery must be replaced periodically, requiring expenditure and a procedure that may be difficult for the end user



Rest-a-Phone Shoulder Rest

Listed on UCSC product list as: Rest-a-phone Black (Shoulder Rest); Product Code L8101





Manufacturer's Comments

For more than 50 years the Rest-A-Phone telephone shoulder rest has served at home and at the office throughout the world providing comfort and hands-free confidence while using the telephone.

Manufacturer's Description

- HANDS-FREE Check E-mail, flip through files, jot notes, sort mail with your handsfree
- COMFORTABLE Will not mess up your hair; doesn't intrude into your sensitive ear; adjustable left or right shoulder options
- ERGONOMICALLY DESIGNED Engineered to adjust and hold the phone at the correct height and angle for greater comfort and ease *without* wedging the handset between the ear and shoulder

Manufacturer Website: http://www.abcplas.com/pages/RAP_about.html

<u>Considerations for Recommending the **Rest-a-Phone Shoulder Rest**</u> Before selecting a telephone accessory, read the *General Considerations for Recommending a Telephone Accessory* on page <u>212</u>.

Pro:



- Allows for improved neck position compared to more common telephone shoulder rest designs
- May be acceptable for users who use the telephone rarely and for short periods and do not experience neck pain

Con:

• Designed for user to prop the phone on the shoulder, which causes potential static holding in the neck and upper shoulder muscles in a mildly to moderately awkward neck position



Plantronics CS70N Wireless Headset System

Listed on UCSC product list as:

Plantronics Cordless Headset Over-Ear (Order HL10 Lifter Separately); Product Code L8CS70N



Manufacturer's Comments

The CS70N gives you the best of both worlds in one professional wireless headset: premium audio performance and sleek, comfortable styling. Featuring a top-of-the-line, Noise-Canceling microphone for clear speech even in environments with distracting background noise, the CS70N is perfect for a wide variety of users and business environments. A stylized, lightweight behind-the-ear design is not only discreet; it is comfortable enough to be worn all day. A superior microphone and earpiece create a high-performance headset yielding great results for both traditional phone lines and IP telephony systems. The CS70N offers wireless freedom with no compromises. This headset can be used with the Plantronics HL10 handset lifter for remote call answer/end capability.

Manufacturer's Description

- Top-performing Noise-Canceling microphone
- Discreet, stylized design
- Lightweight and comfortable all day
- Optimized for performance with IP desk phones
- Recommended for all environments, even those with loud noise levels
- Included lifter automatically lifts handset and returns it to the cradle



- Enables remote or one touch call answer/end with your Plantronics headset
- Can be used with or without the HL10 handset lifter (page 220)

Manufacturer Website: http://www.plantronics.com/us/product/cs70n

Considerations for Recommending the Plantronics CS70N Wireless Headset System

Before selecting a telephone headset, read the *General Considerations* for *Recommending a Headset* on page <u>212</u>.

<u>Pro</u>:

• Lightweight voice tube helps the device to stay balanced on the ear

- Not available with over-the-head style
- Ear piece is wider than that of other wireless Plantronics headsets (this may be desirable or undesirable, depending on the user)
- Over-the ear headsets can interfere with wearing of eyeglasses



Plantronics CS55 Wireless Headset

Listed on UCSC product list as:

Plantronics Cordless Convertible Headset (Order HL10 Lifter Separately); Product Code L8CS55



Manufacturer's Comments

The Plantronics CS55 wireless headset system combines the clarity of traditional corded technology with the mobility of wireless, so employees can move around the office to wherever business takes them – without interrupting or missing a call. Continuing our tradition as a technology leader, Plantronics presents CS55 as the first headset in the United States to implement 1.9GHz UPCS voice-dedicated wireless technology.

Manufacturer's Description

- Roam hands-free up to 300 feet
- Extended hands-free talk time up to 10 hours
- One-touch control over calls and volume
- Enjoy the flexibility of three convertible styles
- Call privacy is ensured with digitally encrypted security
- Battery recharges in three hours
- Can be used with or without the HL10 handset lifter (page 220)



Manufacturer website: http://www.plantronics.com/us/product/cs55

Considerations for Recommending the Plantronics CS55 Wireless Headset

Before selecting a telephone headset, read the *General Considerations for Recommending a Headset* on page <u>212</u>.

<u>Pro</u>:

• Includes over-the-head and over-the-ear styles

- Some users find that the over-the-ear style tilts forward, potentially leading to issues of improper microphone positioning and ear discomfort
- Over-the ear style can interfere with wearing of eyeglasses
- For some users, the headband style can be uncomfortable due to pressure on the side of the head



Plantronics HL10 Handset Lifter

Listed on UCSC product list as:

Plantronics Optional HL10 Lifter for Cordless Headset; Product Code L8HL10



HL10 Handset Lifter

Manufacturer's Comments

Office professionals with phone-intensive responsibilities can now answer or end calls while moving about the office. The HL10 Handset lifter fits on your telephone, letting you answer calls with the touch of a button using your compatible Plantronics wireless headset, conveniently and automatically taking your handset off hook.

Product Features

- Automatically lifts handset and returns it to the cradle
- Enables remote or one touch call answer/end with your Plantronics® headset
- Works with all Plantronics wireless office headset systems
- No desktop footprint
- Compatible with most standard desktop phones
- Fast operation

Manufacturer Website: http://www.plantronics.com/us/product/hl10

Considerations for Recommending the Plantronics HL10 Handset Lifter

Before selecting a telephone headset, read the *General Considerations for Recommending a Headset* on page <u>212</u>.



<u>Pro</u>:

• Allows user to answer and end telephone calls without reaching to the telephone while seated at the desk, as well as when not at the desk (within range of headset base)

- May not be compatible with all telephone models
- Gears wear down with misuse (pushing handset down to manually force lifter down); in this case lifter will need replacement



Plantronics HW261N Binaural Corded Headset

Listed on UCSC product list as: Plantronics Supraplus Binaural Corded Headset; Product Code L8HW261N



Manufacturer's Comments

With the SupraPlus Wideband you get the latest in PC call technology, premium audio clarity, ultra-noise-canceling, all-day comfort for office in a single earpiece, over-the-head design.

Manufacturer's Description

- Wideband audio for more natural sound and clearer conversations
- Fully compatible with standard band environments
- Premium audio assures quality customer communications
- Ultra noise-canceling screen out background noise, reducing distraction
- Over-the-head, all-day comfortable design for intensive use
- Single and dual earpiece options meet varying needs and preferences
- Quick Disconnect cord lets users walk away from their phones without removing headset



Manufacturer website:

http://www.plantronics.com/us/product/supraplus-wideband

Considerations for Recommending the **Plantronics HW261N Binaural Corded** Headset

Before selecting a telephone headset, read the *General Considerations for Recommending a Headset* on page <u>212</u>.

<u>Pro</u>:

- Corded headset is generally more economical than wireless
- Binaural design helps prevent user distraction from surrounding noises
- Quick disconnect feature allows for brief moves away from the telephone without removing the headset

Con:

- Presence of and user's physical attachment to cord and adapter can interfere with workstation activities and work tools
- For some users, the headband style can be uncomfortable
- Having both ears covered may prevent user from hearing useful sounds in the environment
- Must be used with Plantronics M22 adapter or amplifier (page 226)



Plantronics HW251N Monaural Corded Headset

Listed on UCSC product list as: Plantronics Supraplus Monaural Corded Headset; Product Code L8HW251N



Manufacturer's Comments

With the SupraPlus Wideband, get the latest in PC call technology, premium audio clarity, ultra noise-canceling, all-day comfort for office in a single earpiece, over-the-head design.

Manufacturer's Description

- Wideband audio for more natural sound and clearer conversations
- Fully compatible with standard band environments
- Premium audio assures quality customer communications
- Ultra noise-canceling screen out background noise, reducing distraction
- Over-the-head, all-day comfortable design for intensive use
- Single and dual earpiece options meet varying needs and preferences
- Quick Disconnect cord lets users walk away from their phones without removing headset

Manufacturer website:

http://www.plantronics.com/us/product/supraplus-wideband



Considerations for Recommending the Plantronics HW251N Monaural Corded Headset

Before selecting a telephone headset, read the *General Considerations for Recommending a Headset* on page <u>212</u>.

Pro:

- Corded headset is generally more economical than wireless
- Monaural design allows user to hear potentially useful/important sounds in the environment
- Quick disconnect feature allows for brief moves away from the telephone without removing the headset

- Presence of and user's physical attachment to cord and adapter can interfere with workstation activities and work tools
- For some users, the headband style can be uncomfortable due to pressure on the side of the head
- Must be used with the Plantronics M22 adapter or amplifier (page 226)



Plantronics M22 Adapter for Corded Headset

Listed on UCSC product list as:

Plantronics M22 Adapter for both Corded SupraPlus Headsets above; Product Code L8M22



Manufacturer's Comments

The M22 audio processor delivers precise levels of listening comfort, hearing protection, and superior audio performance. The audio processor includes near-universal compatibility with single and multi-line telephones, as well as ergonomically designed volume, headset/handset and mute controls. The Quick Disconnect feature between the audio processor and headset lets you move away from your phone without removing your headset or disconnecting the call. The M22 comes complete with a lightweight 10-foot coil cord for freedom of movement at your desk.

Manufacturer website:

http://www.plantronics.com/us/product/vista-m22

Considerations for Recommending the Plantronics M22 Adapter for Corded Headset

Before selecting a telephone headset, read the *General Considerations for Recommending a Headset* on page <u>212</u>.



Recommend the Plantronics M22 Adapter to be used with the SupraPlus corded headsets (or other compatible Plantronics corded headsets).



Miscellaneous Items

Document Holders

General Considerations for Recommending a Document Holder

- A document holder can be an appropriate solution for a worker who looks at paper documents while working at the computer or away from the computer
- All of the document holders on the *ErgoCruz Preferred Products List* are adjustable in angle. Some are also height-adjustable
- When considering which document holder to recommend, answer the following questions:
 - Is there enough space between the keyboard and monitor to place a sheet of paper in reading position without blocking the view of the screen?
 If not, select a document holder that will be used next to and as close as possible to the monitor
 - Is the worker using a keyboard platform? Consider a document holder that can adjust downward in front of the desk surface if the bottom of the monitor screen cannot be seen over the top of the document
 - Does the worker need to view two or more papers at once? If so, choose a wide document holder (e.g. 18")
 - Does the worker have limited desk space on which to place a document holder?

Consider a monitor-mounted document holder, as long as the worker does not need to reach frequently to the documents

• Does the worker need to write on the same documents s/he is viewing? If so, consider recommending use of a 2" binder turned on its side with the spine away from the user, instead of a document holder. This provides a slightly inclined "compromise" position between ideal viewing and ideal writing



3M DH540 Monitor-Mount 6-Way Adjustable Document Holder

Listed on UCSC Product list as: Document Holder - monitor mounted; Product Code E6DH540





Manufacturer's Comments

This model position documents at eye level, right next to your monitor, on either right or left side. It mounts with Command[™] Adhesive strips for easy and clean removal and with no sticky residue. The holder features extra-wide back plate, wide ledge, sliding clip, and line guide.

Manufacturer's Description

- Sturdy, stable and versatile with 6-way adjustability
- Deep ledge and sliding clip supports
- Holds 150 sheets of letter, legal, or A4-sized documents in portrait or landscape
- Folds away when not in use
- Left or right mount
- Specifications: 9" W x 11.5" H x 1.5" D 0.8 lb

Manufacturer Website:

http://solutions.3m.com/wps/portal/3M/en_US/Health/Safety/Products/Related/?PC_7_R JH9U52300A9E023IJD0GR3O74_nid=L1JNRTRW8Dgs651JNCZ61Cgl8TLZ463M3Vbl



Considerations for Recommending the **3M DH540 Monitor-Mount 6-Way Adjustable** Document Holder

Before selecting a document holder, read the *General Considerations* for *Recommending a Document Holder* on page <u>228</u>.

<u>Pro</u>:

- Does not take up space on the desk surface
- Folds out of the way when not in use
- Adjustable in height and angle

- Requires user to turn his or her head for viewing
- Places papers beyond easy reach of most users



3M DH630 Desktop Document Holder

Listed on UCSC Product list as: 3M Document Holder – Inline (14"); Product Code 3M DH630





Manufacturer's Comments

By keeping documents at the correct height and angle, document holders help reduce eye, neck and shoulder movement. This, in turn, helps minimize strain and enhances overall comfort. For workstations with less space – the DH630 provides the same inline document holding functionality and adjustability as the DH640, but in a narrow 14" wide design. The DH630 can stand alone on the desktop or hang over the edge when the tracks are mounted with 3M Command Adhesive.

Manufacturer's Description

- Positions directly between monitor and keyboard, just below monitor
- Easy to adjust
- Elastic line guide marks you place keeps pages open and stretches to accommodate even the thickest books
- 14" wide this model supports books, catalogs and just about any size document
- Angle and height adjust to suit your needs
- Black / clear
- Dimensions: 12.0 in x 14.0 in x 3.0 in
- Sheet capacity: ~150 sheets

Manufacturer Website:

http://solutions.3m.com/wps/portal/3M/en_US/Health/Safety/Products/Related/?PC_7_R JH9U52300A9E023IJD0GR3O74_nid=HXB4FJ3TFHgs651JNCZ61CgIGSBMRZ7P01bI



Considerations for Recommending the 3M DH630 Desktop Document Holder

Before selecting a document holder, read the *General Considerations for Recommending a Document Holder* on page 228.

Pros:

- Adjustable angle and height
- Can adjust downward in front of the desk surface, for use with a keyboard tray
- 14" wide; accommodates papers side by side
- Designed for recommended position: centered in front of user to avoid awkward neck rotation
- Places papers within easy reach of most users

Cons:

- Slightly difficult to adjust angle and height evenly
- Line guide requires using two hands to move evenly
- Feet must adhere to the desk in order to lower the holder down in front of the desk (self-adhesive included)
- Inline document holders usually require user to bend neck for viewing (but avoid awkward twisting of the neck)



3M DH640 Desktop Document Holder

Listed on UCSC Product list as:

3M Document Holder Inline (18"); Product Code 3M DH640





Manufacturer's Comments

By keeping documents at the correct height and angle, document holders help reduce eye, neck and shoulder movement. This, in turn, helps minimize strain and enhances overall comfort. Elastic line guide marks you place – keeps pages open and stretches to accommodate even the thickest books.

Manufacturer's Description

- Positions directly between monitor and keyboard, just below monitor
- Weighted base allows ledge to dip below the desk edge
- Easy to adjust
- 18" wide this model supports books, catalogs and just about any size document
- Angle and height adjust to suit your needs



- Black / clear
- Dimensions: 11.0 in x 18.0 in x 4.0 in
- Width between Legs: 16"
- Leg Length: 9"
- Height Adjustment Range: 9"
- Ledge Width: 1 1/4"
- Sheet capacity: ~300 sheets

Manufacturer Website:

http://solutions.3m.com/wps/portal/3M/en_US/Health/Safety/Products/Related/?PC_7_R JH9U52300A9E023IJD0GR3O74_nid=DK0MQHZKN0gs651JNCZ61CgIJP9RNVFCV7b

Considerations for Recommending the 3M DH640 Desktop Document Holder

Before selecting a document holder, read the *General Considerations for Recommending a Document Holder* on page 228.

<u>Pro</u>:

- Adjustable angle and height
- Can adjust downward in front of the desk surface, for use with a keyboard tray
- 18" wide; accommodates papers side by side
- Designed for recommended position: centered in front of user to avoid awkward neck rotation
- Places papers within easy reach of most users
- Weighted feet aid stability

Con:

- Slightly difficult to adjust angle and height evenly
- May be too wide to use in small desk spaces and corners
- Line guide requires two hands to move evenly
- Inline document holders usually require user to bend neck for viewing (but avoid awkward twisting of the neck)



Steelcase Details In-line Document Support - Freestanding

Listed on UCSC Product list as: Steelcase Details Line - Document Support; Product Code CDFIS14



Manufacturer's Description

- 14" In-line document holder
- Reduces eye movement from your data to the screen
- Freestanding Unit
- Angle, depth and document clip included
- Use in tandem with Monitor Riser
- Height adjustment of easel
- Fits either around the monitor or adjacent; uses minimal desktop space
- Warranty: 10 years
- Height adjustable easel with an 8" range
- Adjustable for use with a split-top worksurface
- Adjustable focal length to fit preferred distances
- Width adjustable across the entire front for easy access to the CPU

Manufacturer Website:

http://details-worktools.com/products/in-line-document-support-freestanding/

Considerations for Recommending the Steelcase Details In-Line Document Support -Freestanding



Before selecting a document holder, read the *General Considerations for Recommending a Document Holder* on page <u>228</u>.

Pro:

- Adjustable angle and height
- Can adjust downward in front of the desk surface, for use with a keyboard tray
- 14" wide; accommodates papers side by side
- Designed for recommended position: centered in front of user to avoid awkward neck rotation
- Places papers within easy reach of most users
- Line guide can be moved using one hand
- Freestanding 14" wide holder does not adhere to desk, allowing for repositioning

- Slightly difficult to adjust angle and height evenly
- Inline document holders usually require user to bend neck for viewing (but avoid awkward twisting of the neck)



Palm and Wrist Rests

General Considerations for Recommending a Palm Rest (Wrist Rest)

- Palm rests, or wrist rests, can be helpful in some situations, and harmful in others. They are usually <u>not</u> recommended for use with a mouse
- If the worker can comfortably use the keyboard with his or her wrists in neutral (straight) positions without resting on the work surface, a palm rest may be unnecessary
- A palm rest, or wrist rest, can be useful to:
 - Help the user maintain a neutral wrist position while using the keyboard
 - Provide a soft place on which to rest the hands in neutral positions while <u>not</u> actively using the keyboard and mouse
 - Compensate for situations in which the user cannot avoid resting the hands or wrists while keying or mousing
- Caution:
 - The wrists and palms should <u>not</u> be planted on the palm rest while the user is actively keying or mousing. This results in:
 - Repetitive awkward postures
 - Unwanted pressure on the sensitive tissues of the underside of the wrist and palm
 - A palm rest can lead to undue reaching to the mouse in most cases, and to the keyboard in some cases
- When considering whether to recommend a palm rest, answer the following questions:
 - Will repositioning of the keyboard and/or mouse (instead of adding a palm rest) enable the worker to work comfortably with the wrists in neutral positions as recommended?
 - If so, a palm rest may not be needed
 - Does the worker need a soft surface on which to rest the hands and arms while not actively keying and mousing?
 - If so, a palm rest in front of the keyboard may be helpful
 - Are the worker's forearms long enough to easily reach beyond a 3"-wide palm rest and use the keyboard without moving the elbows away from the body? If not, a palm rest in front of the keyboard may cause problems
 - Is the individual using a trackball mouse or adding machine and unable to avoid resting the wrist down on the work surface even when the device is placed in the best position possible?

If so, a palm rest may be helpful, used with caution



IMAK® ErgoBeads[™] Wrist Cushion for Mouse

Listed on UCSC Product list as:

IMAK Beaded Gel Mouse Rest Black /6.25"wx4/25"dx1.5"h; Product Code E610165



Mouse not included

Manufacturer's Comments

IMAK®'s Wrist Cushion for Mouse is an ergonomic wrist support designed by an orthopedic surgeon. It is filled with massaging ergoBeads[™], making for the most comfortable ergonomic wrist support available. The unique design is shaped for easy maneuvering of the mouse, while comfortably supporting your wrist and forearm to eliminate stress.

Manufacturer's Description

- Cushions and massages your wrists
- Cool and comfortable
- Contours to any mouse
- Squeezable for stress relief
- Freeze for extra cooling relief
- Use the IMAK Wrist Cushion for Mouse any time you use your computer mouse, for computing or gaming

Manufacturer Website:

http://www.imakproducts.com/product.php?c=Computer+Comfort&s=16



Considerations for Recommending the IMAK® ErgoBeads™ Wrist Cushion for Mouse

Before selecting a wrist rest, read the *General Considerations for Recommending a Palm Rest (Wrist Rest)* on page $\frac{237}{2}$.

<u>Pro</u>:

- When the mouse cannot be placed in an ideal location, this product may protect the user's arm from resting on a hard work surface edge while mousing
- May be useful with an adding machine or trackball mouse for a user who cannot avoid planting the wrist on the work surface
- Breathable covering with round beads inside allow air flow
- Moveable beads inside cushion feel comfortable to some users, and may allow for some arm movement while in contact with the cushion

- As is true with any raised wrist support cushion used on the near side of the mouse, this product necessitates increased reaching to the mouse and may compel user to plant the wrists on the wrist cushion, potentially leading to awkward postures while mousing
- Higher profile than that of typical wrist rests, could lead to awkward wrist flexion over the cushion while mousing
- Fabric cover may slide on work surface and may also collect dust
- Hardness of beads inside cushion may feel uncomfortable to some users



IMAK® Wrist Cushion for Keyboard

Listed on UCSC product list as:

IMAK Beaded Gel Wrist Rest Black / 19.5"w x 2.5"d x 1.5"h; Product Code E6A10160





Manufacturer's Comments

The IMAK® Wrist Cushion for Keyboard is an ergonomic wrist support designed by an orthopedic surgeon. It is filled with massaging ergoBeads[™], making for the most comfortable ergonomic wrist support available. The unique design conforms to your keyboard, while completely supporting your wrist and forearm in an ergonomically correct position, reducing stress in your hands, wrists and arms. The ergoBeads[™] massage your wrist as you type, providing all day typing comfort and promoting healthy hands and wrists.

Manufacturer's Description

- Cushions and massages your wrists
- Cool and comfortable
- Contours to your keyboard
- Squeezable for stress relief
- Freeze for extra cooling relief
- Length: 47 cm (~18.5 inches)
- Available in black, gray and blue

Manufacturer Website: http://www.imakproducts.com/product.php?s=15

Considerations for Recommending the IMAK® Wrist Cushion for Keyboard

Before selecting a wrist rest, read the *General Considerations for Recommending a Palm Rest (Wrist Rest)* on page $\frac{237}{2}$.



<u>Pro</u>:

- Provides cushioning in front of the keyboard only, without interfering with mouse use
- Flexible shape may conform for use with ergonomic keyboards
- Breathable covering with round beads inside allow air flow
- Moveable beads inside cushion feel comfortable to some users, and may allow for some arm movement while in contact with the cushion

- High profile for most standard keyboards
- May compel user to plant the wrists on the wrist cushion, potentially leading to awkward postures while keying
- Fabric cover may slide on work surface and may also collect dust
- Hardness of beads inside cushion may feel uncomfortable to some users



3M Gel Wrist Rest for Keyboard

Listed on UCSC product list as:

3M Gel Wrist Rest Black / 19"w x 3"d x .75"h; Product Code E6WR310LE



Manufacturer's Comments

Wrist rest has soothing gel comfort with buttery-soft leatherette covering that encourages neutral wrist posture. Anti-microbial protection inhibits the growth of microorganisms such as bacteria. Contains 25% recycled content and comes with a one-year warranty.

Product Specifications

- Color: Black
- Height: 0.75 inch
- Length 19 inch
- Width 2.8 inch

Manufacturer Website:

http://solutions.3m.com/wps/portal/3M/en_US/Health/Safety/Products/Related/?PC_7_R JH9U52300A9E023IJD0GR3O74_nid=F06KW5VJ3Kgs651JNCZ61CgIGTWF43VRQ CbI

Considerations for Recommending the 3M Gel Wrist Rest for Keyboard



Before selecting a wrist rest, read the *General Considerations for Recommending a Palm Rest (Wrist Rest)* on page 237.

Pro:

- Provides cushioning in front of the keyboard only, without interfering with mouse use
- Has a lower profile than most wrist supports
- Leatherette material is smooth and comfortable for some users

- As is true with any raised wrist support, may invite user to plant the wrists on the wrist cushion, potentially leading to awkward postures while keying
- Non-breathable material may feel uncomfortable to some users



Laptop Stands (Laptop Lifters)

General Considerations for Recommending a Laptop Stand (Laptop Lifter)

- A laptop stand is recommended for raising the laptop screen to an appropriate viewing level
- A laptop on a stand should be used with an external keyboard and mouse to avoid placing the arms and hands in awkward positions
- As a general guideline for most users, the stand should be adjusted to place the top of the screen near eye level



Kinesis Laptop Lifter

Listed on UCSC Product list as: Kinesis Adjustable Laptop Stand; Product Code E6AC110LL





Manufacturer's Comments

The Kinesis LaptopLifter is a lightweight, yet sturdy laptop stand that is an excellent choice for anyone who works with their laptop in different locations. As with all laptop stands, it improves cooling and brings the screen closer and higher to enhance visibility while using a separate keyboard and mouse. The Kinesis LaptopLifter combines compactness, easy setup, adjustability, and economy.

Note: Requires an external keyboard and mouse (not included)

Manufacturer Website: http://www.kinesis-ergo.com/laptoplifter.htm

Considerations for Recommending the Kinesis Laptop Lifter

Before selecting a laptop stand, read the *General Considerations for Recommending a Laptop Stand* on page <u>244</u>.

Pro:

- Adjustable to accommodate height requirements of user (as are most laptop stands)
- Compact and relatively lightweight
- Folds flat for travel
- Inexpensive



Con:

- Does not have USB ports; external devices need to be plugged in to the laptop
- Requires external keyboard and mouse (as do all laptop stands)



3M Easy Adjust Notebook Riser

Listed on UCSC Product list as:

3M Adjustable Laptop Riser 16w x 16d x 5-9h Supports 14lbs; Product Code E6LX600MB



(Does not include keyboard and mouse)

Manufacturer's Description

- Raise your notebook screen to an ergonomically correct height and tilt with this easy to adjust riser
- Easily adjust the height up and down through a 4" range, from 5" to 9" from the work surface
- Swivels 360 and tilts 40 degrees for optimal positioning
- Attachment system for docking stations permits quick and easy notebook connectivity
- Supports up to 14 pounds
- Dimensions: 15.75 in x 15.75 in x 5.0 in
- Doubles as an LCD projector riser to help get that projector where you need it for perfect presentations
- 3 Year Limited Warranty

Manufacturer Website:

http://solutions.3m.com/wps/portal/3M/en_US/Health/Safety/Products/Related/?PC_7_R JH9U52300A9E023IJD0GR3O74_nid=94BKCJZ7H0gs651JNCZ61CglG14V8L6B49bl


Considerations for Recommending the 3M Easy Adjust Notebook Riser

Before selecting a laptop stand, read the *General Considerations for Recommending a Laptop Stand* on page <u>244</u>.

Pro:

- Adjustable to accommodate height requirements of user (as are most laptop stands)
- Adjustable angle
- Rotates 360 degrees
- Supports up to 14 pounds

<u>Con</u>:

- Bulky design not as conducive to travel as are lightweight folding models
- Requires external keyboard and mouse (as do all laptop stands)



Monitor Risers

Steelcase Details Monitor Blocks – 3 Pack

Listed on UCSC product list as: Steelcase Details Line - Monitor Blocks (3 pack); Product Code CMNB3



Manufacturer's Description

- Stackable 1-1/2"-high blocks
- Positions monitor at most comfortable height
- Handy paper storage between tiers
- Cable management feature at back
- Supports up to 75 pounds
- 3-pack
- Size: 12" x 12" x 1.5" high
- One-time height adjustment for a dedicated monitor
- Product will not mar a laminate or standard veneer worksurface
- Low-cost solution for single-user workstations

Manufacturer Website: http://details-worktools.com/products/monitor-blocks-3-pack/



Considerations for Recommending the Steelcase Details Monitor Blocks

Pro:

- Low cost solution suitable for raising a monitor in a single-user computer station
- Easy to install and remove, in most cases
- Stackability allows for multiple level choices
- Storage beneath each block can be used to keep papers within easy reach (unless a document holder will block access)
- Originally designed for large, heavy CRT monitors, can now accommodate some of the larger flat screen monitors as well as smaller ones
- Can also be used to raise the height of other items (up to 75 pounds)

<u>Con</u>:

- Not easily adjustable for multiple users
- May take up more desk space than necessary for a smaller monitor
- 1.5" increments may not allow for fine enough height changes for some users



Humanscale Corner Sleeves

Listed on UCSC Product list as:

Humanscale Corner Sleeve (fits desks 1" to 1.5" thick); Product Code E6DE200 Humanscale Corner Sleeve (fits desks 1.5" to 2.5" thick); Product Code E6DE250





Vendor Comments

The Humanscale DE200/DE250 Corner Sleeve will increase your desk space and keyboard accessibility by turning a 90 degree desktop corner into a diagonal corner. This allows you to mount a keyboard [platform] into this space.

Vendor Description

- DE200 fits desks 1" to 1 1/2" thick
- DE250 fits desks 1 1/2" to 2 1/2" thick
- Dimensions: 16" diameter
- Compatible with any Humanscale keyboard tray or mouse platform

Manufacturer Website:

http://humanscale.com/products/product_detail.cfm?group=KeyboardSystems

Considerations for Recommending the Humanscale Corner Sleeve

Pro:

- Fills in an open 90 degree inside corner to support keyboard on work surface or attach keyboard platform closer to the user
- Can allow a keyboard platform to extend out farther from the corner, helping keyboard and/or mouse to be used clear of the side surfaces



Con:

- Creates a slight drop-off at its edges, causing an uneven work surface that may be bothersome if using a mouse or writing on the work surface in those locations
- May not be compatible with keyboard platforms made by manufacturers other than Humanscale
- When used to attach a keyboard platform, moves the user farther from the desk surface (be sure to move the monitor and frequently used items closer as needed)



Humanscale Neat Links

Listed on UCSC product list as:

Humanscale Wire Management (Neat Links) 24"; Product Code E6NL24LB and E6NL24SB



Manufacturer's Comments

Humanscale's NeatLinks remove the stress of tangled wires, reduce hazards and protect technology; these cable managers can help you achieve an organized workspace. Designed to house and route cables, power strips and ballasts, the NeatLinks system keeps technology and cords off the floor to maintain an organized work area and facilitate cleaning under desks. NeatLinks are designed for quick, easy installation – in any direction, to almost any plane – with two screws or mounting tape, and can be installed in countless configurations to accommodate each user and unique work environment.

Manufacturer's Description

- E6NL24LB: Large diameter, black; 3.6" diameter x 24" length
- E6NL24SB Small diameter, black; 2.6" diameter x 24" length
- Sleek, unobtrusive design
- Accommodate power strips, multiple ballasts and a wide array of cables
- Curved, finger-friendly angle at ends of each channel eases routing and ensures visual access
- Reduce clutter and associated hazards
- Facilitate cleaning under desks

Manufacturer Website:

http://humanscale.com/products/product_detail.cfm?group=NeatLinksl



Lighting Products

General Considerations for Overhead Lighting

When the existing overhead lighting is too bright, it may cause eye discomfort due to:

- Directly shining on the worker's eyes
- Reflection from work surfaces and papers, or from windows and other environmental surfaces

Possible solutions include:

- Turning off some or all of the overhead lights and using natural light or desk lights
 - Lights shining uncomfortably on a worker's eyes will usually be those that are above and in front of the worker
 - Check for a wall switch that controls the portion of the lights that are problematic you may be able to turn off some of the lights and leave others on
 - Ask to have fluorescent tubes removed, diffused, replaced with tubes emitting less light, or otherwise disabled
 - When using natural light from windows, be aware that lighting changes with the time of day as well as the season. Ideally, a worker will have control over the amount of light that enters by way of window blinds with controls that are within reach. Supplemental task lighting may be needed
- Changing the orientation of the desk and the worker

General Considerations for Desk or Task Lighting

When lighting is too dim or diffuse, a desk light may be advisable. Check with the vendor for suggestions and consider the following factors:

- Size of the area to be illuminated
 - To light a large portion of a room, consider a floor lamp, placing it in a location that will avoid shining in the worker's or visitors' eyes
 - To light a broad area of a desk, consider an upright table lamp
 - For directly lighting a small area of paperwork, consider a "boom" style task light or a small table lamp. More light is required for reading paperwork than for reading a computer screen
- User preference / energy efficiency
 - Consider fixture style and color
 - Consider type of light: compact fluorescent, incandescent, halogen, LED, etc.



Humanscale Diffrient Double Arm Task Light

Listed on UCSC product list as:

Humanscale Diffrient Double Arm Light w/ Base, Silver; Product Code K7DA2EBS



Manufacturer's Comments

The elegant Diffrient Task Light provides long-lasting pure white illumination and a glare reducing shade. An effortlessly adjustable task light that supports the latest ballast-inbulb technology, the Diffrient Task Light maximizes the efficiency of compact fluorescent bulbs to provide long-lasting pure white illumination. The parabolic reflector shade minimizes glare and optimizes light distribution, while the highly engineered design provides effortless, balanced movement for easy positioning.

Manufacturer's Description

- User-friendly design promotes cost- and energy-savings
- Developed by industrial designer Niels Diffrient
- 5 year, 24/7 warranty
- Reinforced plastic reflector shade cuts glare and stays cool
- Lower rear lip on shade to further reduce direct glare
- Internal counterbalance for one-touch positioning
- Feather-light movement
- No friction knobs or rigid joints
- 180° horizontal and 220° vertical shade adjustability and 360° base rotation allow for infinite adjustability



- Multiple mounting options, including desktop base, clamp, slatwall, direct wall, direct desk and panel mounting options
- Available with single arm or double arm (up to 42" reach)

Manufacturer Website:

http://humanscale.com/products/product_detail.cfm?group=TaskLightSingleArm

Considerations for Recommending the Humanscale Diffrient Double Arm Task Light

<u>Pro</u>:

- Freestanding with weighted base
- Double arm provides up to 42" reach and good adjustability
- Uses compact fluorescent bulbs for energy saving compared to incandescent
- Less glare than with some less expensive task lights
- Aesthetically simple design

Con:

• Costs more than many other task lights



Steelcase Standard Shelf Light

Listed on UCSC Product list as: Steelcase Overhead Light; Product Code LSM24K



See product information on page $\underline{37}$ in the Desks and Workstations section.



Anti-Fatigue Mats and Chair Mats

General Considerations for Recommending Chair Mats

Chair guards, or chair mats, serve two main purposes:

- To enable an office chair to roll more freely over a carpeted floor
- To protect carpet or other flooring

When recommending chair mats, consider:

- Size
 - Measure the area that needs the chair mat, keeping in mind that it can be difficult to place a floor mat beneath furniture such as file cabinets and desk legs
 - Some common chair mat sizes include:
 - 36" x 48", including a 20" x 12" lip
 - 45" x 53", including a 25" x 12" lip, or without lip
 - 46" x 60", including a 25" x 12" lip, or without lip
- Flooring and purpose. Select the appropriate mat for:
 - Hard floor; low, medium or high pile carpet
 - Light or heavy duty use. Select heavy duty for large individuals and for high use workstations
 - Antistatic needs as applicable

Consult with the vendor for guidance

Pro:

- A chair mat can enable the worker to move the chair easily around the workstation
- Chair mats protect carpet or hard flooring from stains as well as excessive wear from chairs, shoes, and other stresses
- Mats are available in various sizes
- Some mats have additional properties, e.g. anti-static, shaped edges, carpet 'cleats'

Con (& Precautions):

- A chair mat, particularly a lightweight mat on thick carpet or pad, can develop "divots" that may interfere with chair movement and positioning
- A worker rolling the chair off the edge of the mat may have a hard time rolling it back onto the mat
- Easy rolling of the chair may encourage workers to stay seated for excessive time periods instead of standing up intermittently
- Rolling the chair repeatedly from place to place may create potential risk associated with repetitive motion, as well as forceful activities if the worker moves the chair by pulling on furniture



- Mats could pose slight potential trip and/or slip hazards, especially if used in traffic areas or around liquids
- The shape and size of the chair mat may not match the available flooring
- Positioning the mat may be physically challenging for some workers. A mat may be awkwardly sized or shaped. Furniture may need to be moved. Moreover, some mats have carpet 'cleats' (to help keep them in place on carpets) that add additional force and sharp points

General Considerations for Recommending Anti-Fatigue Mats

Anti-fatigue mats are designed for workers who stand for long periods. Prolonged standing, particularly on hard surfaces, can increase the risk of foot, ankle, leg, and back discomfort. When recommending anti-fatigue mats, consider:

- Size measure the area that needs the mat
 - Some common mat sizes include:
 - 2' x 3' (suitable for use at a single standing workstation)
 - 3' x 5' (suitable for a larger workstation or possibly two adjacent workstations)
 - 3' x 40' (for an extended work counter)
- Purpose
 - For a standing office area a general anti-fatigue mat will suffice
 - For a washing or other wet area, select a mat with non-slip properties that allows for drainage
 - Specialized mats are also available for industrial, anti-static and other specific applications
- Ask the vendor for recommendations

<u>Pro</u>:

- Mats reduce strain and potential discomfort of prolonged standing on hard surfaces
- Available in various sizes
- Some mats can also improve other types of safety, e.g. reducing risk of slipping.

Con (& Precautions):

- Potential trip hazard; especially when small mats are used in traffic areas
- Mats may interfere with rolling chairs used in the same area
- Standing surface may be uneven at the edge of a mat; standing unevenly could potentially lead to undue stress on spine, hips, knees, and/or feet
- Mats may be unsuitable and potentially dangerous for use with certain footwear such as high heels
- Perforated mats may need to be removed for cleaning



- Moving of mats may pose risks associated with bending and lifting
- Mats need to be replaced periodically; check the manufacturer's warranty as an indicator of life expectancy



E.S. Robbins Standard Lip and Wide Lip Chair Mats

Listed on UCSC Products List as:

Chairmat - 36x48 Standard Lip Medium Pile Carpet Bevel Edge; Product Code E9122063

Chairmat - 45x53 Wide Lip Medium Pile Carpet Bevel Edge; Product Code E9122138

Product Dimensions

Model E9122063: 36" x 48" overall; lip: 20" x 10" Model E9122138: 45" x 53" overall; lip: 25" x 12"

Vendor's Comments

Mats shield your carpets from wear and tear.

Features

- Protects medium pile carpets up to 3/4" thick with padding
- High clarity workstation mat allows the beauty of your floor to show through
- Crystal Edge creates smooth, effortless roll on/off mat
- Exclusive AnchorBar cleat system makes chair mats less dangerous to handle using a series of staggered, perpendicular bars to anchor the mat securely without damage to carpet

Manufacturer's Use and Care Instructions

- Use a damp cloth soaked in mild soap and water to clean chair mat, if necessary
- Some chair mats are shipped rolled. Upon receipt of a rolled chair mat, immediately unroll and place on a flat surface. Depending on environmental conditions such as temperature, it may take up to 72 hours for a chair mat that has been rolled to regain its natural shape
- Do not use a chair mat in areas where it will be subjected to temperatures below 60 degrees Fahrenheit (16 degrees Celsius) or above 95 degrees Fahrenheit (35 degrees Celsius)
- Do not use a cleated chair mat specified for use with carpet on hard flooring surfaces such as wood, tile, stone, concrete or vinyl
- Do not use chair mats in an environment where moisture may be present beneath carpet or other flooring materials
- Handle cleated chair mats with care



Manufacturer's Website: http://www.esrchairmats.com/chair-mats/index.html

Considerations for Recommending the E S Robbins Standard Lip 36" x 48" Chair Mat and E S Robbins Wide Lip 45" x 53" Chair Mat

Before selecting any floor mat, refer to the *General Considerations for Recommending Chair Mats and Anti-Fatigue Mats* on page <u>258</u>.

<u>Pro</u>:

- Lip extends forward beneath the desk to help prevent rolling off the front of the mat
- Beveled edge makes occasional rolling on and off the mat relatively smooth
- The smaller, 36" x 48", mat may work well in small spaces if the user is not moving in the chair to different areas of the workstation
- The more spacious, 45" x 53", mat allows more freedom of movement of the chair about the workstation

<u>Con</u>:

• The 36" x 48" mat's small overall size and relatively shallow lip increases the likelihood that the chair will roll off of the sides and back of the mat



E S Robbins 46" x 60" Rectangular Chair Mat

Listed on UCSC Products List as: Chairmat - 46x60 Rectangular Utility Medium Pile Carpet Bevel Edge

Vendor's Comments

Mats shield your carpets from wear and tear.

Features

- Protects medium pile carpets up to 3/4" thick with padding
- High clarity workstation mat allows the beauty of your floor to show through
- Crystal Edge creates smooth, effortless roll on/off mat
- Exclusive AnchorBar cleat system makes chair mats less dangerous to handle using a series of staggered, perpendicular bars to anchor the mat securely without damage to carpet

Manufacturer's Use and Care Instructions

 Use a damp cloth soaked in mild soap and water to clean chair mat, if necessary



- Some chair mats are shipped rolled. Upon receipt of a rolled chair mat, immediately unroll and place on a flat surface. Depending on environmental conditions such as temperature, it may take up to 72 hours for a chair mat that has been rolled to regain its natural shape
- Do not use a chair mat in areas where it will be subjected to temperatures below 60 degrees Fahrenheit (16 degrees Celsius) or above 95 degrees Fahrenheit (35 degrees Celsius)
- Do not use a cleated chair mat specified for use with carpet on hard flooring surfaces such as wood, tile, stone, concrete or vinyl
- Do not use chair mats in an environment where moisture may be present beneath carpet or other flooring materials
- Handle cleated chair mats with care

Manufacturer's Website: http://www.esrchairmats.com/chair-mats/index.html



Considerations for Recommending the E S Robbins 46" x 60" Rectangular Chair Mat

Before selecting any floor mat, refer to the *General Considerations for Recommending Chair Mats and Anti-Fatigue Mats* on page <u>258</u>.

Pro:

- Rectangular mat may fit well in a space that does not require an extension ("lip") beneath the desk
- Mat without lip may provide more flexibility in positioning
- Beveled edge makes occasional rolling on and off the mat relatively smooth

Con:

• Does not extend beneath the desk as easily as does a mat with a lip



Crown Cushion Step Rubber Surface Mats

Listed on UCSC Products List as: Cushion Step Rubber Mat - 36x60 Black; Product Code E9CU3660BK Cushion Step Rubber Mat - 36x72 Black; Product Code E9CU3672BK

Vendor's Comments

Helps keep legs and back feeling comfortable for jobs that require standing for extended periods of time.

Features include beveled edges and rounded corners help keep mat flat. The 3/32" thick rubber tops are fused to 1/8" thick sponge foam.

Manufacturer's Comments

Benefits

- Exclusive Fusion Technology
- Surface resistant to oil, grease and all common acids and alkalis as well as to organic solvents if removed promptly
- Easy-to-clean vinyl is puncture resistant

Product Description

- Thickness: 1/2"
- Material: Vinyl top surface with PVC foam backing
- Anti-Fatigue

Manufacturer's Website:

http://www.crown-mats.com/products/cushionstepspiffyvinyl.html

Considerations for Recommending Crown Cushion Step Rubber Surface Mats

Before selecting any floor mat, refer to the *General Considerations for Recommending Chair Mats and Anti-Fatigue Mats* on page <u>258</u>.

Pro:

• Spacious mats appropriate for relatively large work areas such as multi-station standing work counters

Con:

• Smooth vinyl surface may be slippery if wet; consult vendor for information on mats for wet areas





• Mats are large and deep; consult vendor for information on mats for smaller areas including single standing stations



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