

63-500 SERIES

High-Performance Lab Table



63-541 table is shown with the following accessories:

- (1) 81-301-02 Front Support Bar, 48"
- (1) 81-302-02 Rear Support Bar, 48"
- (2) 81-303-01 Armrest Pads
- (2) 81-312-02 10" x 32 1/2" Sliding Shelf
- (1) 83-014-01 Retractable Casters

Accessories for 63-500 Lab Tables are specified separately and listed in the Ordering Chart on Page 57.

Features

Gimbal Piston™ Isolators

Our Gimbal Piston™ Isolator has been proven by independent tests to consistently outperform the competition. It achieves both horizontal and vertical isolation down to very low input levels.

Thin-Wall Rolling Diaphragms

An integral part of the Gimbal Piston, the thin-wall, dacron-reinforced, rolling diaphragm air seals are only 0.020 in.

GENERAL SPECIFICATIONS

Isolator natural frequency:

High Input

Vertical = 1.2 Hz

Horizontal = 1.0 Hz

Low Input

Vertical = 1.5 - 2.0 Hz

Horizontal = 1.2 - 1.7 Hz

Isolation efficiency @ 5 Hz:

Vertical = 70 - 85%

Horizontal = 75 - 90%

Isolation efficiency @ 10 Hz:

Vertical = 90 - 97%

Horizontal = 90 - 97%

Gross load capacity:

1,400 lb (640 kg)

Net load capacity:

350 lb (160 kg)

Finish:

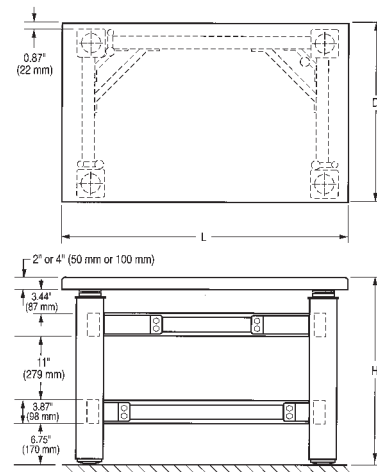
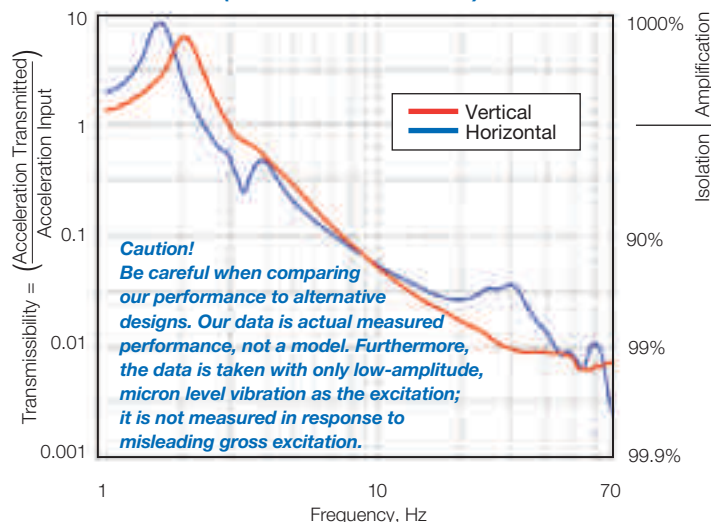
Medium texture black powder coat frame, stainless steel top

Facilities required:

80 psi nitrogen or air

TMC 63-500 Series High-Performance Lab Table provides an excellent vibration-free working surface for loads up to 350 lb (160 kg). Now with modular construction, these tables are recommended for use in such diverse applications as electrophysiology, cell injection, ultramicrotomy, photomicroscopy, scanning tunnel microscopy, and confocal laser scanning microscopy.

63-531 Vibration Isolation Performance (actual measured data)



(0.5 mm) thick and extremely flexible. They do not stiffen the spring as thicker rubber diaphragms do.

Aluminum Height Control Valves

All systems are equipped with rugged aluminum height control valves. Virtually unbreakable, they are finger adjustable with no need for tools. The standard model maintains height to ± 0.050 in. (± 1 mm); the precision model, to ± 0.005 in. (± 0.1 mm).

Internal Piston Travel Restraint

Unique in the industry, TMC provides husky, tamper-proof, built-in piston travel restraints. The restraints are completely independent of the table valves and have been ram-tested at forces above those produced by the pistons operating at full pressure. They cannot be decoupled accidentally and do not interfere with setting up and using the table, but simply protect against over-travel without the use of external bars that create hazardous pinch points. Heavy loads, including the top plate, can be safely removed from a table in full operation.

Tiebar Gussets

Exclusive TMC tiebar gussets increase table frame rigidity. They compensate for the elimination of the front tiebar in order to provide kneewell space.

Rugged Built-in Leveling Feet

Table legs include built-in fine-thread 3 in. (75 mm) diameter screw jack levelers with 1/2 in. (13 mm) travel, provision for external adjustment, and a handy adjustment wrench. The base is a solid, slightly domed shape to assure solid, wobble-free contact with sloping or irregular floors.

Superior TableTops™

Our standard laminated tops provide an attractive stainless steel ferromagnetic working surface with highly damped, high stiffness construction at low cost.

For applications requiring the ultimate stiffness and damping or mounting holes, specify our patented CleanTop® II honeycomb top.

How to Order

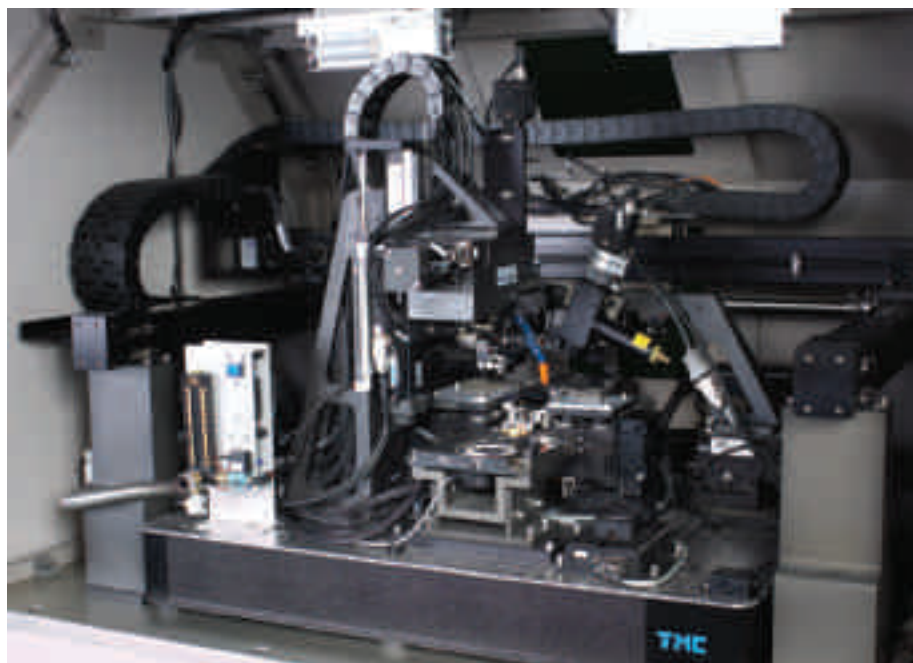
See Ordering chart on Page 57.

Which Top Is Best for You?

Stainless Steel Laminate, our least expensive 63-500 Series top, is recommended for applications that require a strong magnetic attachment and will not involve repeated exposure of the top to corrosive liquids. However, stains from such liquids can be removed with an industrial strength stainless steel cleaner. This top does not have the precision flatness of our CleanTop® honeycomb top. Flatness is ± 0.030 in. (± 0.8 mm).

Plastic Laminate on Stainless Steel is an easy-to-clean alternative to stainless steel, without sacrificing structural performance. A plastic laminate is added to the top surface, which reduces ferromagnetic attachment strength.

CleanTop® features TMC's patented spill-proof, drilled and tapped mounting hole array. Tops are 4 in. (100 mm) thick and have 1/4–20 holes on 1 in. spacing or M6 holes on 25 mm spacing. The small cell-size steel honeycomb design provides even stiffer and better damping than our stainless steel laminate. Guaranteed flat to ± 0.005 in. (± 0.13 mm).



Automation Engineering Incorporated designed and produced this high-end alignment and laser welding station for complex opto-electronics. The station uses TMC's 63-500 Series vibration isolation system, which incorporates Gimbal Piston™ air vibration isolators to filter both vertical and horizontal floor vibration. The vibration isolation system also includes a CleanTop® Steel Honeycomb Optical Top to provide an extremely stiff, damped structure with a flat, stainless steel working surface and an array of drilled and tapped mounting holes. This table is the foundation for AEI's station, a combination of precision motion stages, machine vision, flexible and re-configurable control software, and interchangeable tooling to reliably and repeatably align and weld multiple photonic components.

Accessories

Armrests and Sliding Shelves

Tables may be fitted with armrests and rigidly supported sliding side shelves just above the table top. The sliding shelves must be used in conjunction with a front support bar and a rear support bar that are fastened to the table legs. The bars can be retrofitted but cannot be used with the full perimeter enclosure or Faraday Cage.



Front Support Bar

This adjustable steel rail mounts on the table's front legs. It has a slot in which the shelves mount and is normally ordered with the armrest pads. The bar may be centered along the length of the table or cantilevered to suit your application.

Rear Support Bar

This adjustable rail mounts on the rear table legs and supports the rear end of the sliding shelves. It may also be cantilevered.

Armrest Pads

Adjustable leather forearm rests which fasten to the front support bar. A new armrest pad is now available which fastens to the perimeter enclosure.

Sliding Shelf

Shelves are made of wood with white plastic laminate covering all sides. A metal bracket on the front edge of the shelf fits into the slot in the front support bar. Shelves slide freely from side to side and are easily lifted off the support bars. Built-in stops prevent shelves from sliding out of slots. When ordering sliding shelves, you must order front and rear support bars.

Raised Rear Shelf

The 14 in. (350 mm) deep raised rear shelf mounts on the full perimeter enclosure and is the length of the corresponding table top. The shelf is solidly supported 18 in. (450 mm) above the isolated surface with no direct noise transmission to the table top. NOTE: This shelf cannot be used with the Faraday Cage.

Clear Acrylic Enclosure

The clear acrylic enclosure provides protection from drafts and dust. Custom configurations allow for acoustic and light protection. Features include: clear acrylic panels, solid top, and triple-track front section with a three-piece sliding front panel.



Casters

A set of four retractable casters with a total weight capacity of 1,000 lb (450 kg) can be mounted to the base of the table legs.

Fixed Full-Perimeter Enclosure

A fixed, welded-steel structure that completely surrounds the table top to provide non-isolated support for Faraday Cages, raised rear shelves, Plexiglas enclosures, and other special fixtures. It cannot be used with sliding shelves or support bars.

Precision Height Control Valves

To minimize bottled air supply usage, standard TMC height control valves have a small "dead band," resulting in a height return accuracy of ± 0.05 in. (± 1.3 mm). Precision valves control height to within ± 0.005 in. (0.13 mm) but have a slight,



constant leak. To specify precision height control valves with a table, add the letter "P" after the basic table model number. Precision valves may also be retrofitted to installed tables.

Articulated ArmRest

Our rugged, leather Articulated ArmRest adds stability and comfort when delicate manipulations must be made without disturbing the isolated surface. Mounts to front support bar or perimeter enclosure.



Articulated Armrests ease microscope use.

Subshelf

For additional storage space, a shelf mounted beneath the isolated table top is available and may be retrofitted at any time.

How to order

See Ordering Chart on page 57. (See following example.)

Example: To order a 30 in. x 48 in. (750 mm x 1,200 mm) table with a 2 in. (50 mm) thick stainless steel laminate top, front and rear support bars, two 10 in. (250 mm) wide shelves, and armrest pads, the following numbers are specified:

1 each	63-541	table
1 each	81-301-02	front support bar
1 each	81-302-02	rear support bar
2 each	81-312-02	10 in. (250 mm) shelf
2 each	81-303-01	armrest pad
Note: You must specify quantity.		

OnTrak™

An easy-to-use, roll-off option for 63-500 Tables that dramatically simplifies table rigging and installation.

Features & Benefits

- No heavy lifting required
- Table ships pre-installed on isolator frame
- Casters required
- Reduces set-up time
- Simply roll table off skid and into final destination



How to Order

1. Simply specify the "OnTrak" part number from the chart at right.
2. Contact TMC for pricing.
3. Be sure your table configuration includes caster set No. 83-014-01.

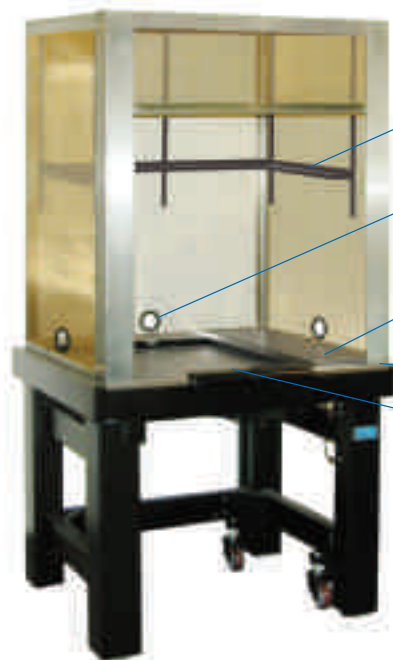
OnTrak Ordering Chart

Order Number	Nominal Table Size	Price
90-510	25" x 36"	Contact TMC
90-530	30" x 36"	Contact TMC
90-540	30" x 48"	Contact TMC
90-550	30" x 60"	Contact TMC
90-560	36" x 48"	Contact TMC
90-570	36" x 60"	Contact TMC

Table and Accessory Ordering Chart

TABLE MODEL	25 in. x 36 in. 625 x 900 mm	30 in. x 30 in. 750 x 750 mm	30 in. x 36 in. 750 x 900 mm	30 in. x 48 in. 750 x 1200 mm	30 in. x 60 in. 750 x 1500 mm	36 in. x 48 in. 900 x 1200 mm	36 in. x 60 in. 900 x 1500 mm
Isolator frame only (no top)	63-510	63-520	63-530	63-540	63-540	63-560	63-560
Isolator with 2 in. stainless steel laminate	63-511	63-521	63-531	63-541	63-551	63-561	63-571
Isolator with 2 in. stainless steel and plastic laminate	63-512	63-522	63-532	63-542	63-552	63-562	63-572
Isolator with 4 in. CleanTop, 1/4-20 on 1 in. spacing			63-533	63-543	63-553	63-563	63-573
Isolator with 100 mm CleanTop, M6 on 25 mm			63-534	63-544	63-554	63-564	63-574
ACCESSORY MODEL							
Front support bar	81-301-01	81-301-00	81-301-01	81-301-02	81-301-03	81-301-02	81-301-03
Rear support bar	81-302-01	81-302-00	81-302-01	81-302-02	81-302-03	81-302-02	81-302-03
Armrest pads (front support bar)	81-303-01 for all tables (order 2)						
Armrest pads (perimeter enclosure and Faraday Cage)	81-303-02 for all tables (order 2)						
Articulated armrest	81-304-01 for all tables						
Articulated armrest adapter, front bar	81-305-01 for all tables						
Articulated armrest adapter, perimeter enclosure	81-306-01 for all tables						
Sliding shelf, 6 in.(150 mm) wide	81-311-01	81-311-02	81-311-02	81-311-02	81-311-02	81-311-03	81-311-03
Sliding shelf, 10 in. (250 mm) wide	81-312-01	81-312-02	81-312-02	81-312-02	81-312-02	81-312-03	81-312-03
Sliding shelf, 14 in. (350 mm) wide	81-313-01	81-313-02	81-313-02	81-313-02	81-313-02	81-313-03	81-313-03
Sliding shelf, 20 in. (500 mm) wide	81-314-01	81-314-02	81-314-02	81-314-02	81-314-02	81-314-03	81-314-03
Full perimeter enclosure, 2 in. (50 mm) tops	81-321-01	81-321-02	81-321-03	81-321-04		81-321-06	
Full perimeter enclosure, 4 in. (100 mm) tops			81-322-03	81-322-04		81-322-06	
Raised rear shelf	81-324-01	81-324-02	81-324-01	81-324-04		81-324-04	
Subshelf	81-325-01	81-325-02	81-325-03	81-325-04	81-325-04	81-325-04	81-325-04
Sliding shelf for perimeter enclosure	81-327-03	81-327-04	81-327-04	81-327-04		81-327-06	
Acrylic enclosure			81-328-03	81-328-04		81-328-06	
Casters, set of 4	83-014-01 for all tables						

Faraday Cages



Type II Faraday Cage

Optional "U"-shaped hanging shelf

New 2 in. diameter holes for cable passage

Optional non-isolated side shelf oriented front-to-rear

Full perimeter enclosure (required to mount cage)

Optional armrest pads are now available with Faraday Cages



BenchTop Faraday Cage

Bench-mounted cage does not require vibration isolation table.

Same features as our table-mounted cages

Stainless-steel baseplate

Type II Faraday Cage

The Type II Faraday Cage offers improved access and simplified assembly. The "window-shade" type retracting front panel is easier to operate than hinged doors and causes less disturbance when adjusted. This front panel may be positioned anywhere between fully opened and closed and stays in position without a fastener. The front door is shipped assembled and the entire unit may be assembled in a few minutes with a screwdriver (provided).

This cage incorporates the same stainless steel frame and copper-mesh material as previous versions. It mounts to (and requires) TMC's full-perimeter enclosures and mounts to our 63-500 Series tables.

Our 40 in. tall Type II Faraday Cages now include a convenient 2 in. diameter hole in the base of the side and rear panels. This feature eases cable interface to the interior of the cage. The hole is sleeved with a rounded rubber liner

to shield sharp edges and assure long life. In addition, we now offer a new version of our armrest pads that is compatible with our cages. These armrest pads are virtually identical to our non-Faraday Cage pads but adhere with Velcro straps rather than clips or magnets.

BenchTop Faraday Cage

Until recently, our Faraday Cages have only been available as part of a complete TMC vibration isolation table system.

The cages required our Perimeter Enclosure option and could not be assembled without a TMC 63-500 Series Vibration Isolation Table as its base.

We now offer the same line of 40 in. tall cages with a baseplate which allows the cage to be used on a bench-top without a corresponding TMC table. The base of the cage is a reinforced stainless steel plate which can support a compact vibration isolation system, microscope, or other instrument.

Type II Faraday Cage Ordering Chart

Type II Faraday Cage	Description	D		L	
		in.	mm	in.	mm
81-333-03	Type II Faraday Cage, 40 in.	30	750	36	900
81-333-04	Type II Faraday Cage, 40 in.	30	750	48	1,200
81-333-06	Type II Faraday Cage, 40 in.	36	900	48	1,200

BenchTop Faraday Cage Ordering Chart

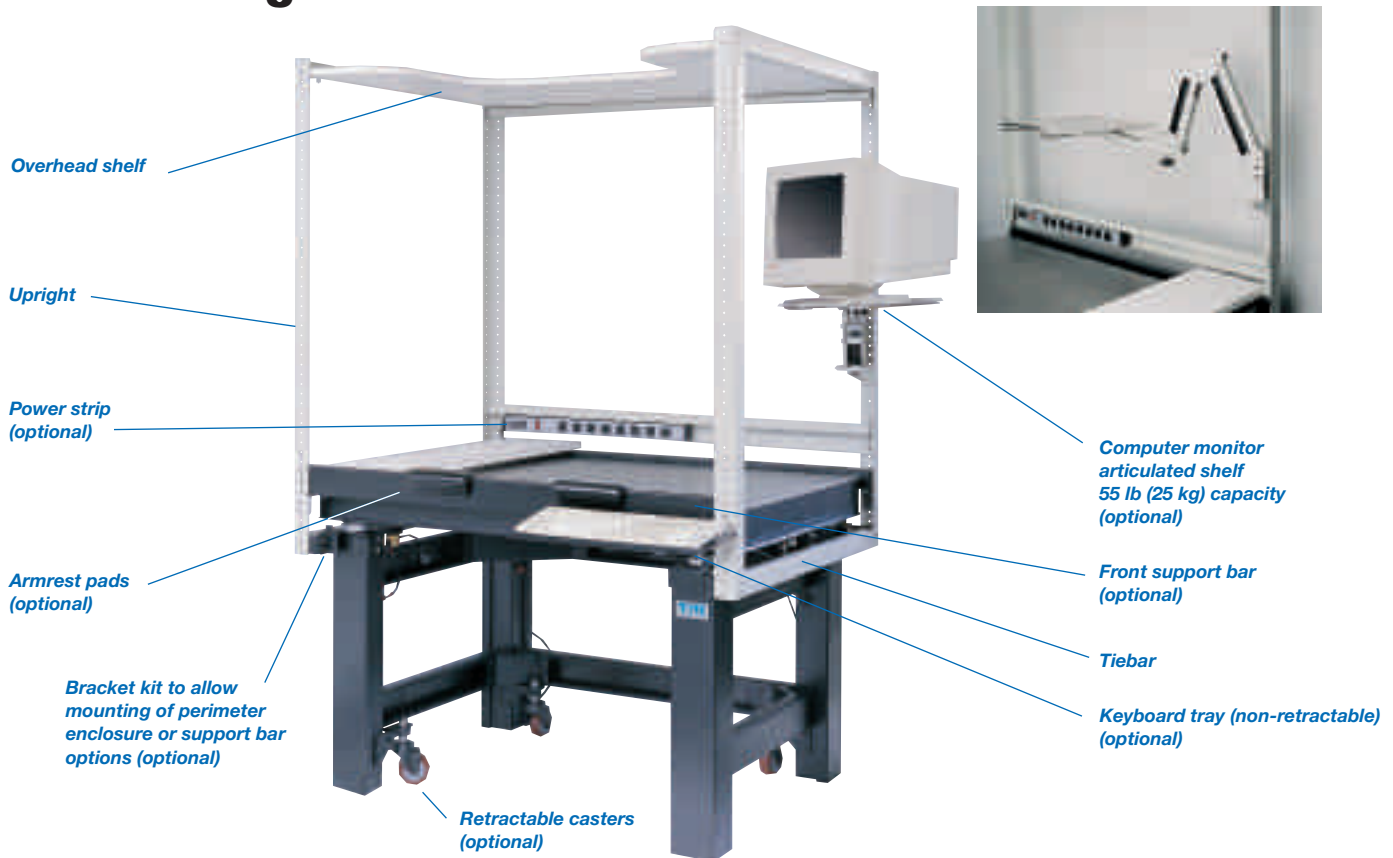
BenchTop Faraday Cage	Description	D		L	
		in.	mm	in.	mm
81-334-03	BenchTop Faraday Cage	30	750	36	900
81-334-04	BenchTop Faraday Cage	30	750	48	1,200
81-334-06	BenchTop Faraday Cage	36	900	48	1,200

Accessory Ordering Chart

Description	30 in. x 36 in. 750 x 900 mm	30 in. x 48 in. 750 x 1200 mm	36 in. x 48 in. 900 x 1200 mm
Armrest pads (F.Cage)	81-303-02 (order 2)		
Full perimeter enclosure, 2 in. (50 mm) tops	81-321-03	81-321-04	81-321-06
Full perimeter enclosure, 4 in. (100 mm) tops	81-322-03	81-322-04	81-322-06
Hanging shelf, "U"-shaped	81-335-03	81-335-04	81-335-04
Sliding side shelf, 8 in. wide	81-332-04	81-332-04	81-332-06

SpaceSaver™

Overhead Rack System for Ergonomic Mounting of Shelving Accessories



SpaceSaver™ offers a range of accessories for our 63-500 Series High-Performance Vibration Isolation Tables. It is a convenient way to mount computer monitors, keyboards, power strips, and miscellaneous items to an air-isolated table system.

The Basic System includes:

- 4 uprights
- 4 tiebars (front to rear)
- 2 tiebars (side to side)
- 1 frame mounting bracket kit
- 1 top shelf
- 1 hardware kit

SpaceSaver may be retrofit to most existing TMC tables. The modular design incorporates a “building-block” approach so components may be added at a later date. SpaceSaver is ideal for electrophysiology rigs,

optical microscope-based measurement setups, and any other application for a vibration isolation table requiring interface with computers, power supplies, and other large devices.

SpaceSaver Ordering Chart

Description	30 in. x 36 in.	30 in. x 48 in.	36 in. x 48 in.
Basic System	81-340-03	81-340-04	81-340-06
Extra Top Shelf Kit**	81-341-03	81-341-04	81-341-06
Monitor Support Kit	81-342-01	81-342-01	81-342-01
Keyboard Tray Kit*	81-343-01	81-343-01	81-343-01
Power Strip Kit	81-344-01	81-344-01	81-344-01
Kit to mount perimeter enclosure option	81-345-01	81-345-02	81-345-02
Kit to mount front or rear support bar option	81-346-01	81-346-01	81-346-01
Front Support Bar	81-301-01	81-301-02	81-301-02
Padded Armrest for Front Support Bar	81-303-01	81-303-01	81-303-01
Rear Support Bar	81-302-01	81-302-02	81-302-02
Casters (set of 4)	83-014-01	83-014-01	83-014-01

* Requires front support bar

** Precludes use of monitor support kit