



For your general digital camera needs, request our "SPOT Insight" Brochure.



For your low light digital camera needs, request our "SPOT RT" Brochure.



For your substage illuminator needs, request our "Transilluminating Bases" Catalog.



For your camera-to-microscope optical coupler needs, request our "Microscope Couplers" Catalog.



**DIAGNOSTIC**  
instruments, inc.

6540 BURROUGHS • STERLING HEIGHTS  
MICHIGAN • USA • 48314-2133  
PHONE 586-731-6000 FAX 586-731-6469

E-MAIL [info@diaginc.com](mailto:info@diaginc.com)  
WEBSITE [www.diaginc.com](http://www.diaginc.com)



STEREO MICROSCOPE

BOOM STANDS



**DIAGNOSTIC**  
instruments, inc.

# CONTENTS

## Stereo Microscope Boom Stands

### Boom Stands

SMS15/16 Standard Boom Stand . . . . .	2-3
SMS6B Standard Ball Bearing Boom Stand . . . . .	4-5
SMS20 Large Ball Bearing Boom Stand . . . . .	6-7
SMS25 Articulating Arm Boom Stand . . . . .	8-9

### Option Details

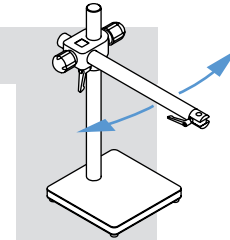
Base and Mounting Options . . . . .	10-11
Microscope Mounting Options . . . . .	12-13

# OVERVIEW

## Get the Proper Stand For Your Task . . .

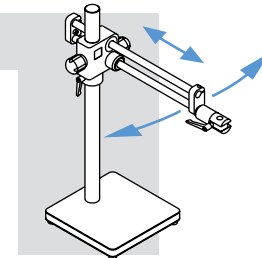
### SMS15/16 Standard Boom Stands

- Small to Medium Microscopes or Cameras
- Fixed Observation Position or Swing In, Swing Out (x)
- Adjustable Height (z) and In/Out (y) Position
- Lowest Price



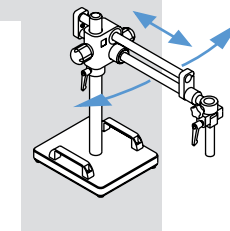
### SMS6B Standard Ball Bearing Boom Stands

- Small to Medium Microscopes or Cameras
- Changing Observation Position in Horizontal Plane (x,y)
- Adjustable Height (z) Position
- Moderate Price



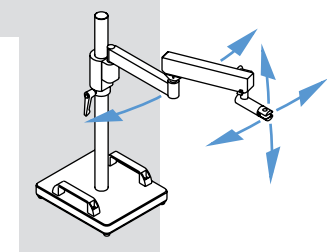
### SMS20 Heavy Duty Ball Bearing Boom Stands

- Large Microscopes with Cameras
- Changing Observation Position in Horizontal Plane (x,y)
- Adjustable Height (z) Position
- High Magnification Work
- Premium Price



### SMS25 Articulating Arm Boom Stands

- Small to Medium Microscopes or Cameras
- Changing Observation Position in All Three Dimensions (x,y,z)
- Maximum Compactness, No Need for Clearance Behind Boom
- Moderate to Premium Price



### Base Options

- Accommodate Your Mounting Requirements
- Allow Existing Stands to be Mounted in New Locations

### Microscope Mounting Options

- Allow Quick Adjustment of Microscope Tilt
- Adapters for Most Current and Older Microscopes

# BOOM STANDS

## SMS15/16 Standard Boom Stand

### Features of the SMS15/16 Stand

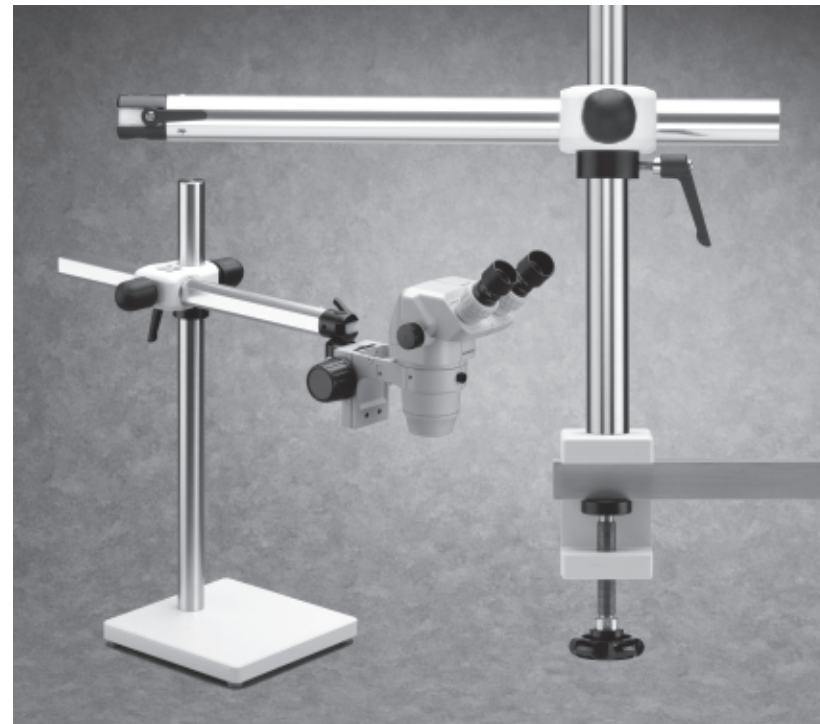
- Made to resist corrosion
- Nylon bearing surfaces avoid wear and slide easily
- Adjustable lever handles and "Soft-Grip" knobs

### SMS15/16 Boom Stands

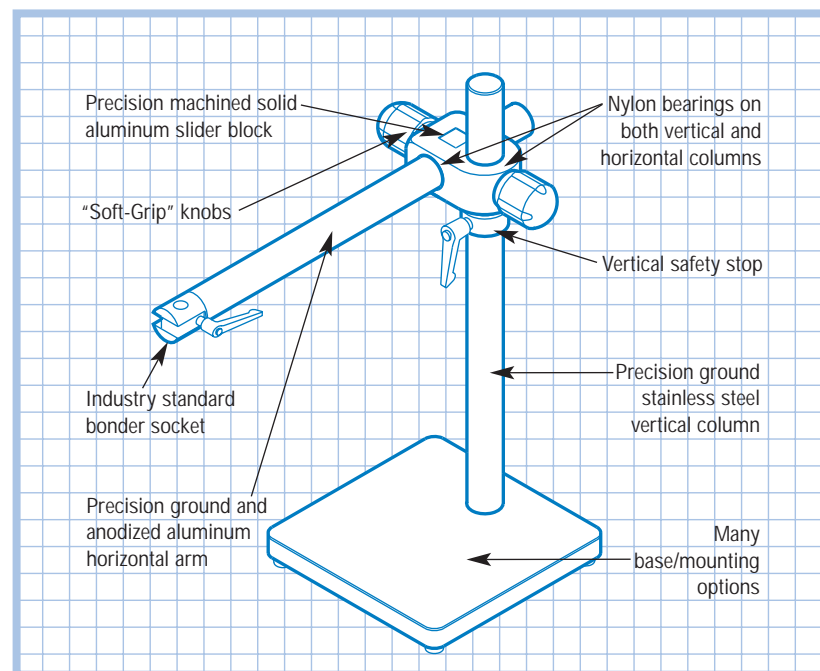
Low cost combined with high quality and unique safety features make the SMS15/16 Boom Stand an unmatched value in its class. Its height and long reach create ample room to work on and inspect large parts under the microscope.

The "Bonder Mount Socket" at the end of the horizontal arm accepts the industry standard 5/8" diameter microscope mounting dowel. Focus drives with this mounting dowel are commonly available from microscope manufacturers. Microscopes that do not have the standard 5/8" mounting dowel can be mounted with a Diagnostic Instruments tilting or non-tilting microscope mount (see pages 12 & 13). A lever knob adjusts a friction collar that captures the 5/8" mounting dowel and allows the microscope to rotate around a vertical axis. The microscope then can be easily aligned to the user's eyes when repositioned.

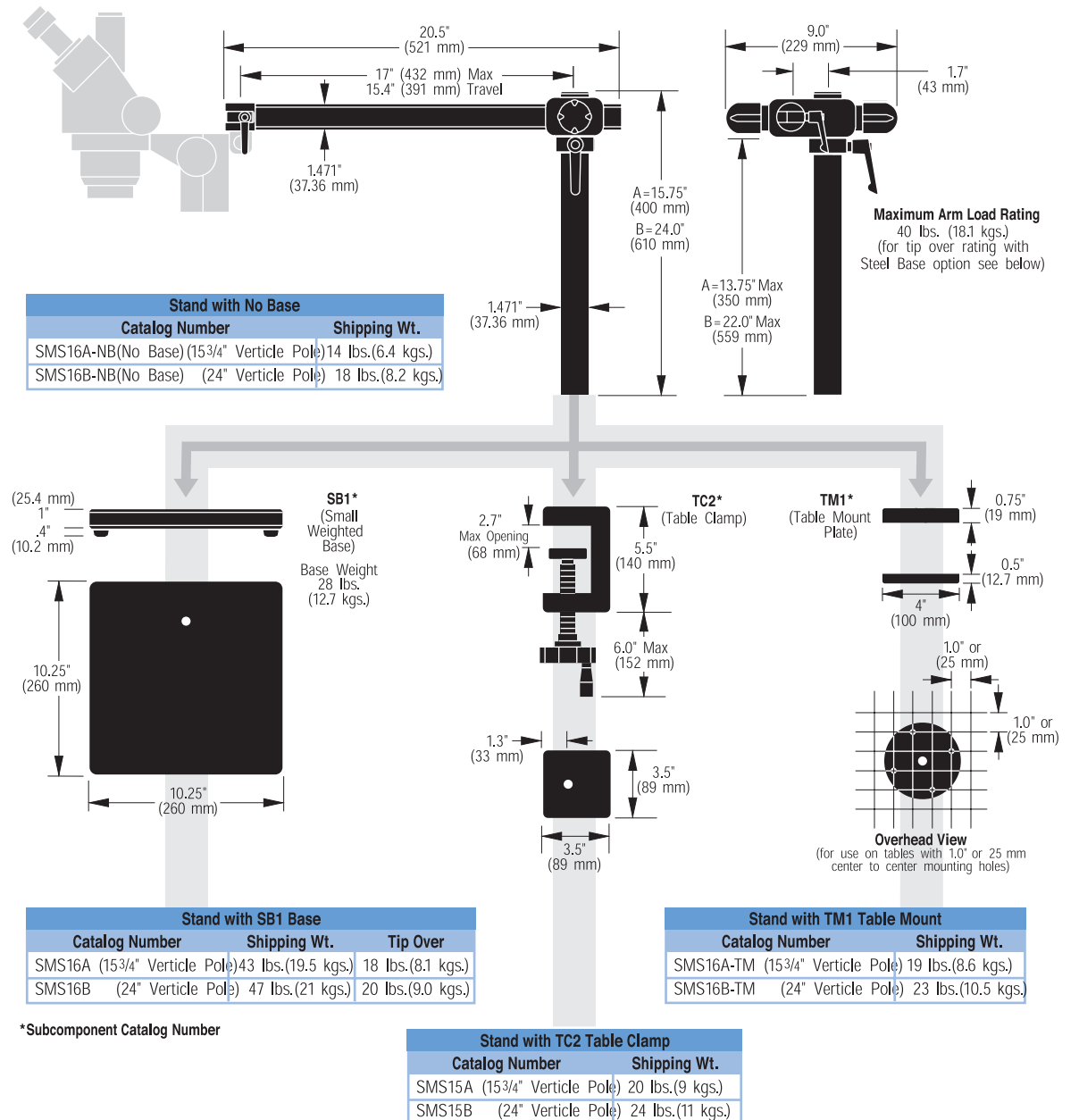
Anti-rotation is accomplished using a delrin plug and a flatted horizontal arm. The vertical and horizontal movements can be securely locked into position with "Soft-Grip" knobs. Vertical column lengths of 15.75" and 24" are available. The extra length column is used to compensate for the work space lost when microscope mounts are used. Select the appropriate base option for your application (see page 3). For a detailed description of the base and mounting options see pages 10 & 11.



SMS15 and SMS16 Boom Stands



SMS15 and SMS16 Features



# BOOM STANDS

## SMS6B Standard Ball Bearing Boom Stand

### Features of the SMS6B Stand

- Linear ball bearing support of the dual shaft horizontal arm creates a smooth, gliding movement
- Many of the same features found on the most expensive stands available at a moderate price
- Adjustable lever handles and "Soft-Grip" knobs for your convenience

### SMS6B Boom Stands

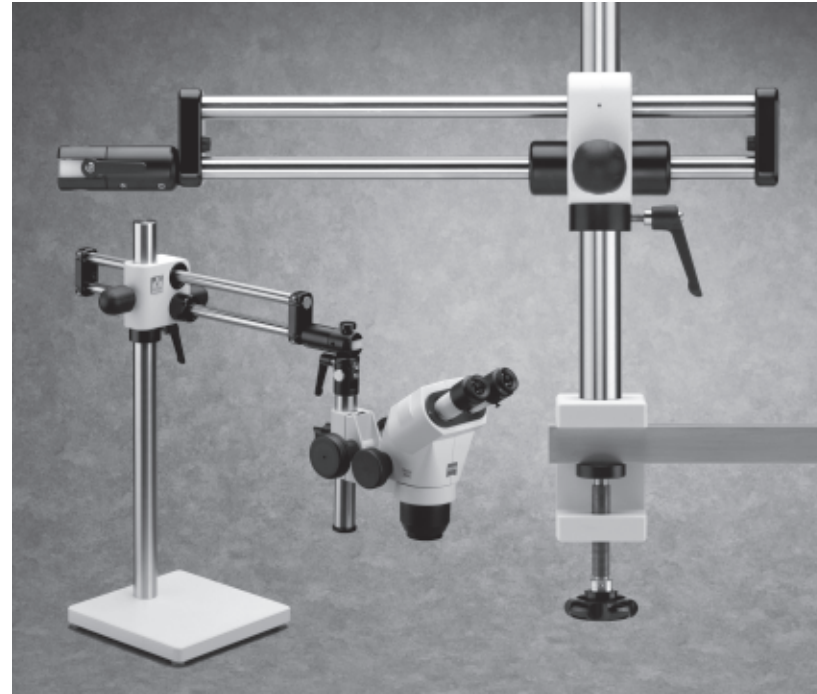
The SMS6B stand was designed for people who are using smaller stereo microscopes for inspection work and want a boom stand that gives them smoother horizontal arm movement than our SMS16 and is less expensive than our large SMS20 stand.

Combining the best of both worlds, the SMS6B, like the SMS20, has a ball bearing supported dual shaft horizontal arm that allows it to move smoothly with none of the "slip-stick" that is common with bushing supported horizontal arms. Ball bearing guides are used on both shafts for extra smooth operation. Like the SMS16, the SMS6B needs no adapter if your microscope focus mount has the industry standard 5/8" diameter mounting dowel.

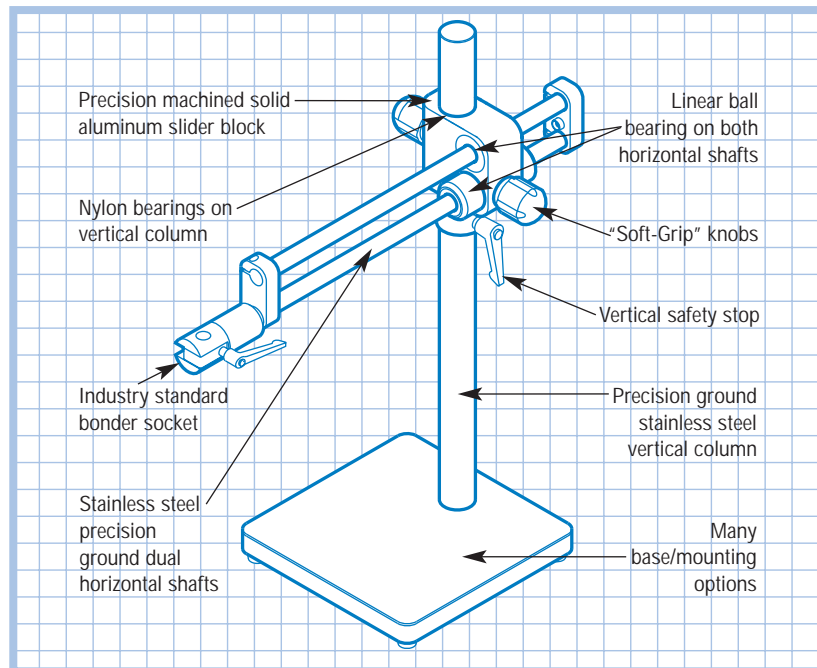
The 5/8" diameter dowel on a "Bonder Mount" fits into a vertical socket in the end of the horizontal arm. A lever knob adjusts a friction collar that traps the "Bonder Dowel" and allows the microscope to rotate around a vertical axis. This allows the microscope to be aligned to the user's eyes when repositioned.

Microscopes that do not have this 5/8" dowel can be mounted with adapters listed on page 12 & 13.

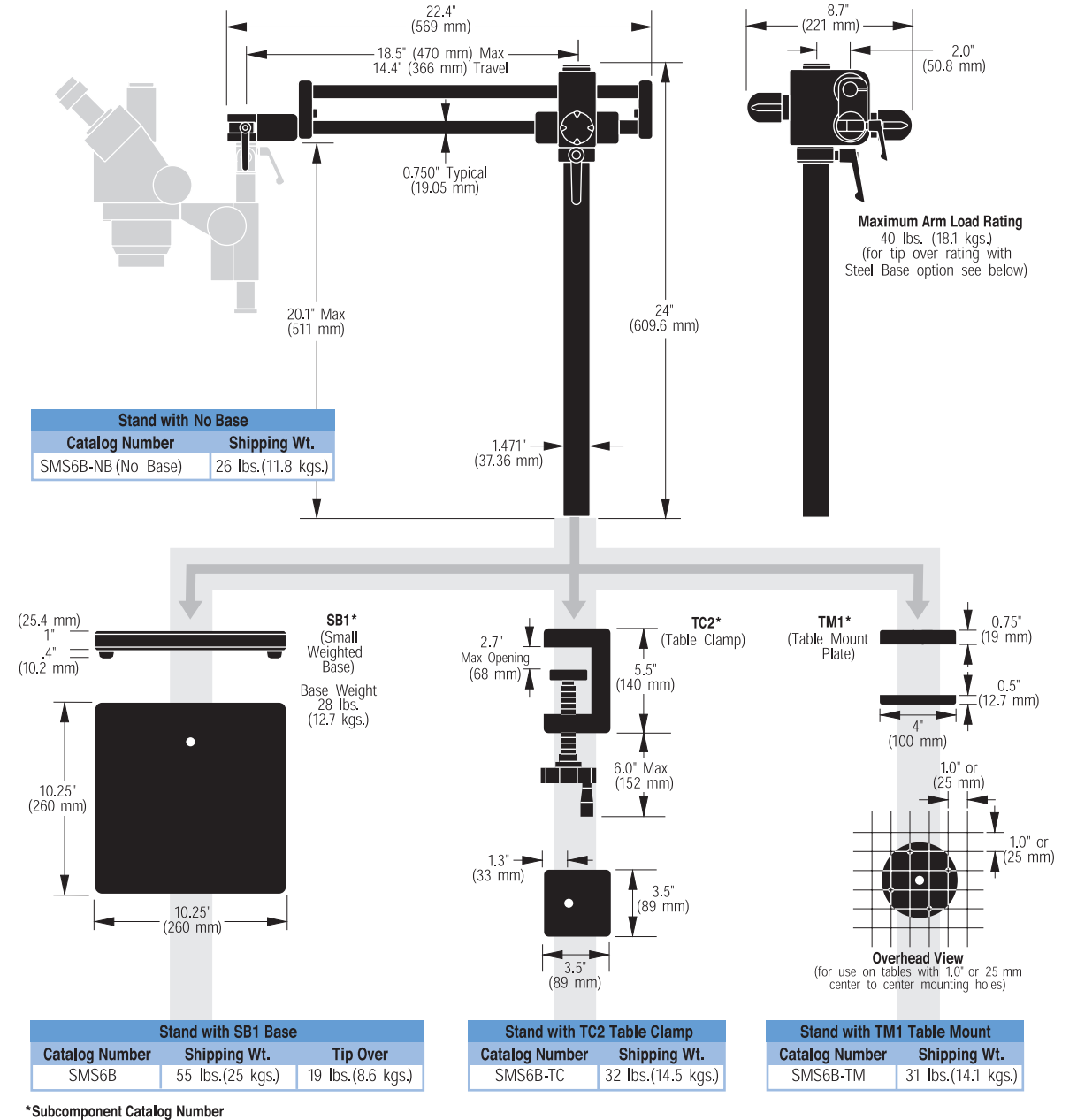
Details of the available base/mounting options are outlined on pages 5, 10 & 11.



SMS6B and SMS6B-TC Boom Stands



SMS6B Features



# BOOM STANDS

## SMS20 Large Ball Bearing Boom Stand

### Features of the SMS20

- Linear ball bearing support of the dual shaft horizontal arm creates a smooth, gliding movement
- Supports large research grade stereo microscopes with full camera systems
- Offers great resistance to tipover

### SMS20 Boom Stands

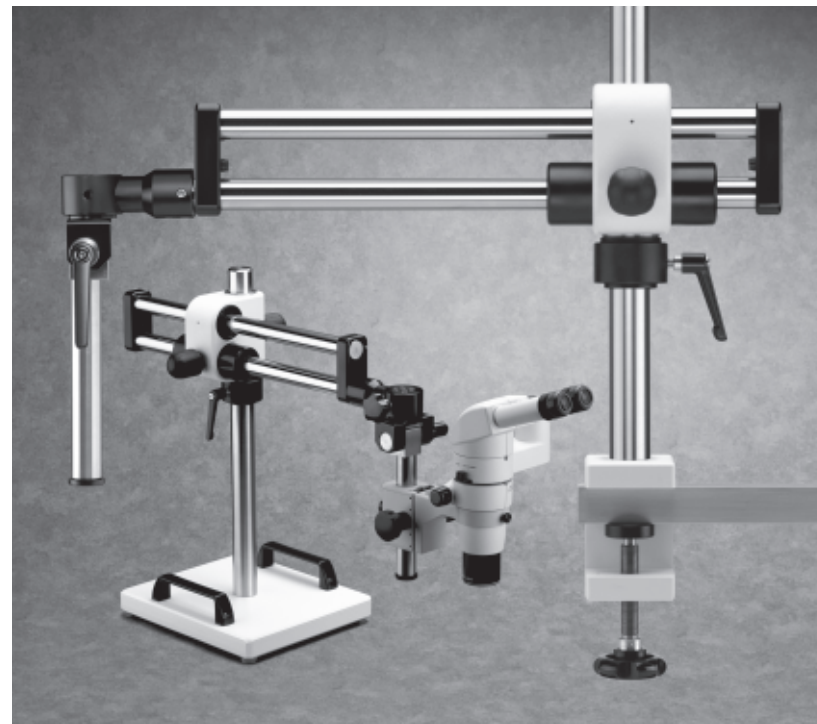
The SMS20 uses linear ball bearings to support the horizontal arm, allowing it to glide over the work surface with none of the binding inherent in other boom stands. It is now possible to scan a large flat area, such as a printed circuit board, by simply guiding the microscope with your hands.

### High Precision Mount

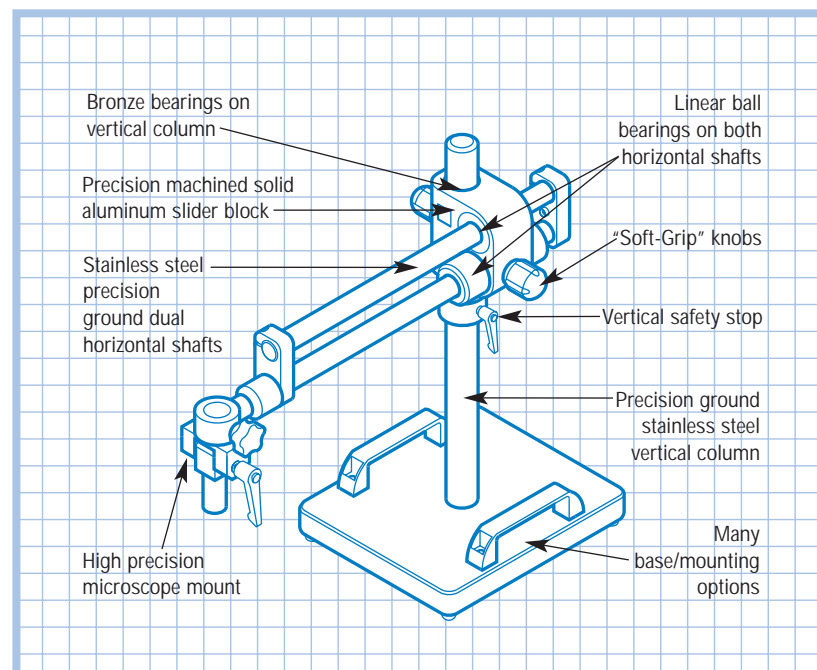
Our heavy-duty tilting and swiveling microscope mount incorporates two degrees of freedom. One allows the scope to swivel 360° around a vertical axis. The second permits 90° of tilt from vertical to horizontal positions. In addition, the heavy duty mount can securely lock the microscope in any orientation, even when loaded down with a large camera system.

### Multiple Base Options

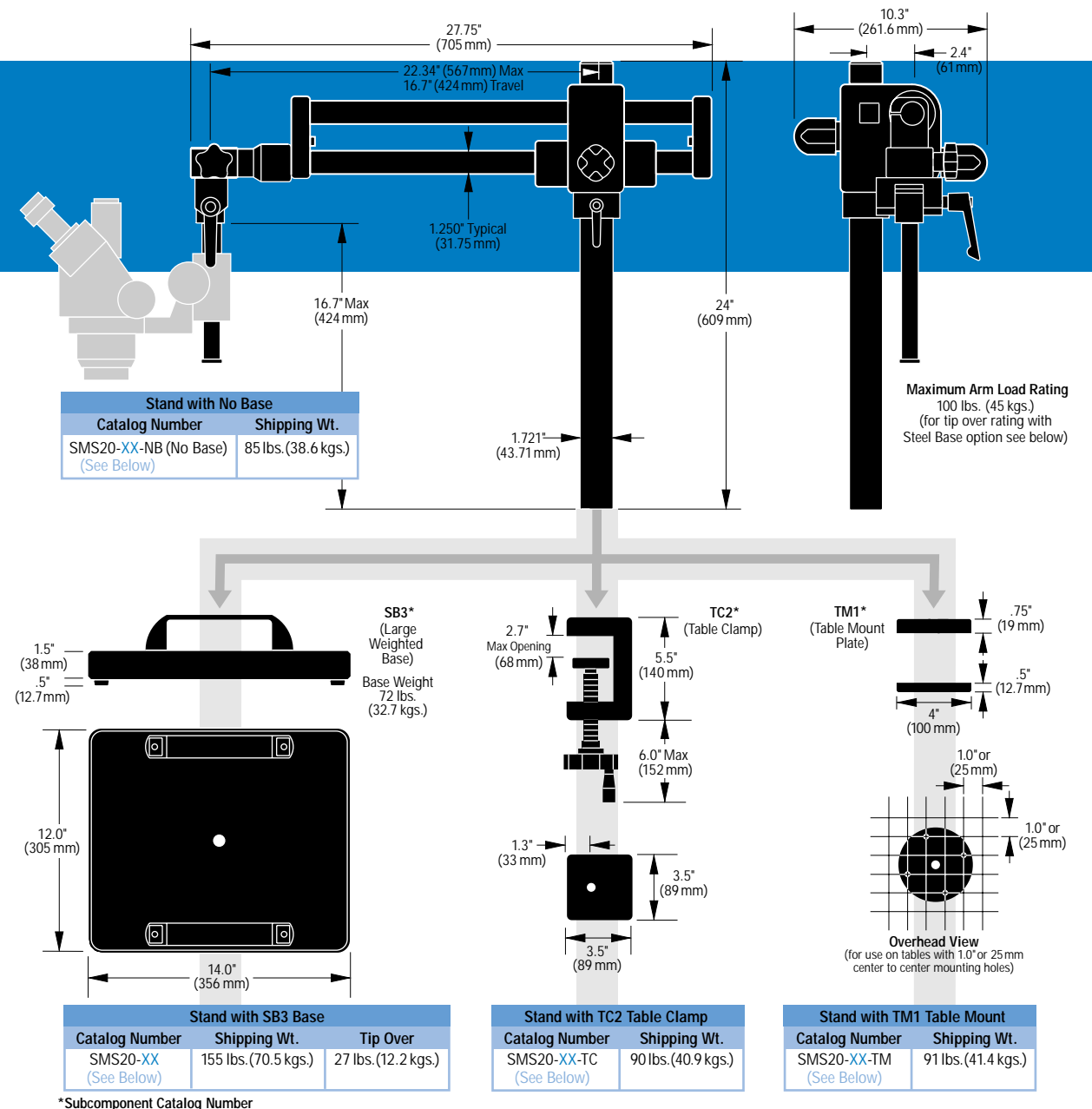
Details of the available base options are outlined on pages 7, 10 & 11.



SMS20 and SMS20-TC Boom Stands



SMS20 Features



Description	Model Designator Number (-XX-)
<b>Industry Standard</b>	
5/8" Bonder Socket	-20-
<b>Leica/Wild</b>	
MZ series; 10446176 motorized focus drive (focus drive provided by customer, NOT shortened)	-26-
S, MZ series; 445 615-focus drive shortened to 171.5 mm, 76 mm travel	-27-
S, MZ series; 445 616-focus drive shortened to 171.5 mm, 76 mm travel (focus drive provided by customer)	-28-
M3, M10 side face column (column provided by customer)	-17-
M5, M7, M8, M400, M420 (25 mm Ø mounting column)	-7-
<b>Meji</b>	
RZ series	-18-
<b>Nikon</b>	
SMZ-1, -2B, -2T (24.5mm Ø mounting column), SMZ-10 (76265 focus mount required)	-2-
SMZ-U, SMZ-10A, SMZ645, SMZ660, SMZ800, SMZ1000, SMZ1500 (32mm Ø mounting column) (for focus mount A, C or D)	-19-
<b>Olympus</b>	
SD/SF series, SZX, SZH, SZ with SZ-ST5 focus mount, BXF5 (32mm Ø mounting column)	-18-
<b>Unitron</b>	
ZST, ZSB (24.5mm Ø mounting column)	-3-
<b>Zeiss</b>	
IB, III, IV, IVB (18 mm Ø mounting column)	-8-
SV6, SV8, SV11, SR, DR, DRC, Stemi Series	-6-

# BOOM STANDS

## SMS25 Articulating Arm Boom Stand

### Features of the SMS25

- Adjustable counter-balance arm allows easy, hand guided, up and down movement
- Works in spaces where a conventional boom stand will not fit
- Accepts standard 5/8" bonder mount

### SMS25 Boom Stands

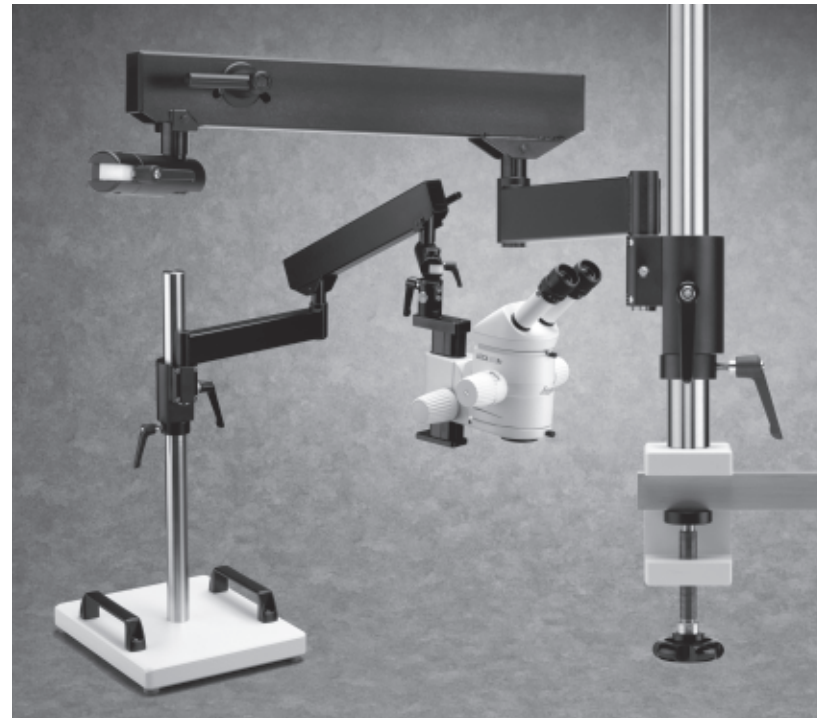
The SMS25 is a light duty, articulating arm boom stand designed for use with smaller microscopes at lower magnifications without cameras. Ideal for crowded labs or repetitive movement, the articulating arm gives free range of motion without the clearance behind the mounting location that is required by standard boom arms.

The adjustable, counter-balance arm moves up and down through 14.5" of vertical travel while stretching over 29.5" from arm mount center to microscope mount center. The vertical position can be locked via a lever at the end of the arm. The adjustment range of the counter-balanced section is 4-20 lbs. allowing optimization of the lift assist for the microscope.

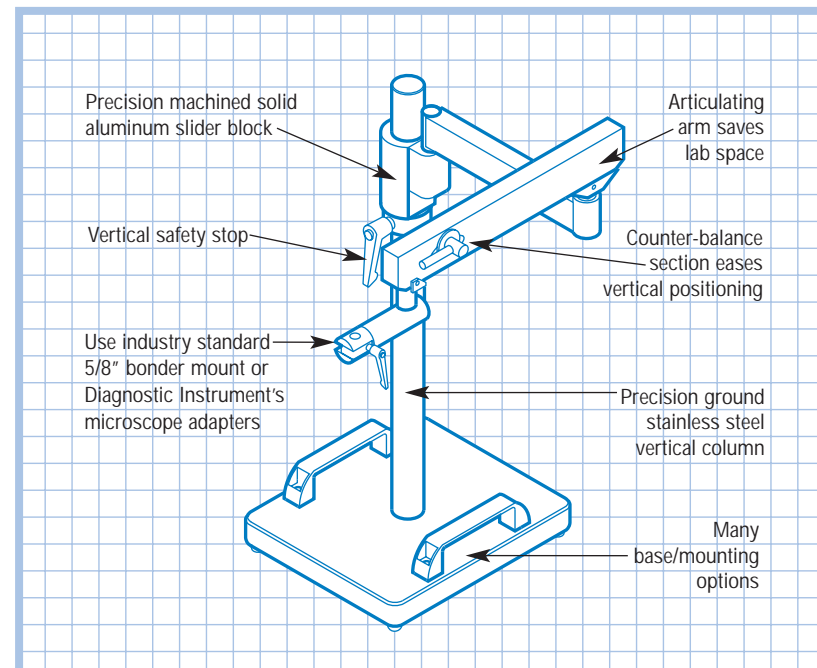
The "Bonder Mount Socket" at the end of the horizontal arm accepts the industry standard 5/8" diameter microscope mounting dowel. Focus drives with this mounting dowel are commonly available from the microscope manufacturers. In addition, Diagnostic Instruments can provide tilting and non-tilting adapters for new and old "post mount" microscope focus drives. The latest socket design incorporates a lever handle that allows for "no-tool" installation and adjustment of the friction in the bonder socket. The vertical orientation of the socket allows for the alignment of the microscope to the operator's eyes when the arm is swung into new positions.

### Multiple Base Options

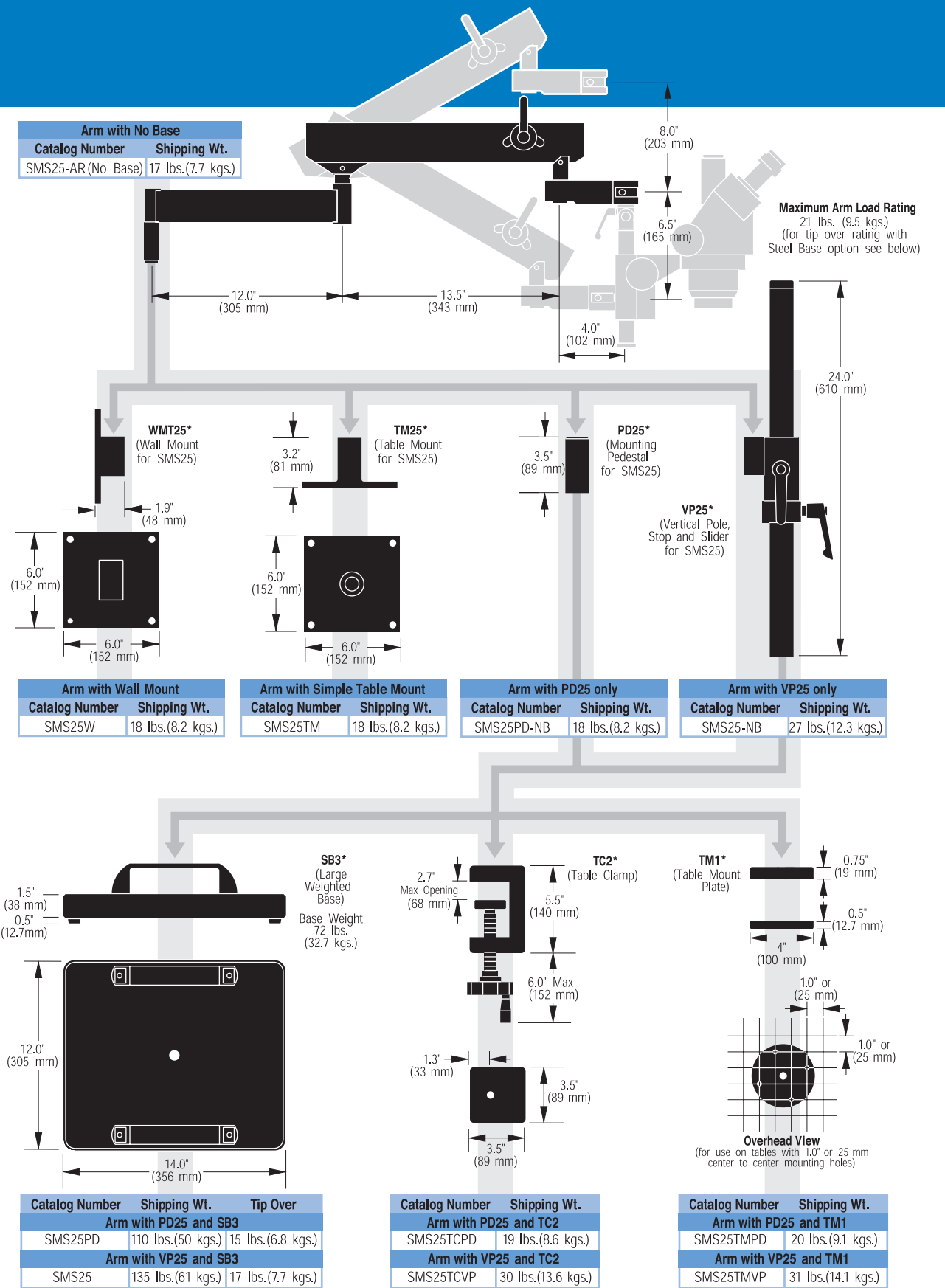
Details of the available base options are outlined on pages 9, 10 & 11.



SMS25 and SMS25-TC Boom Stands



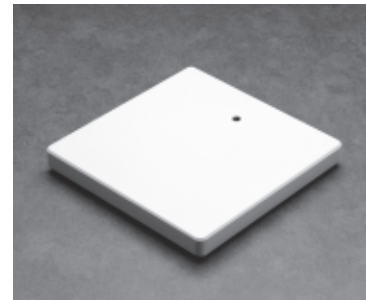
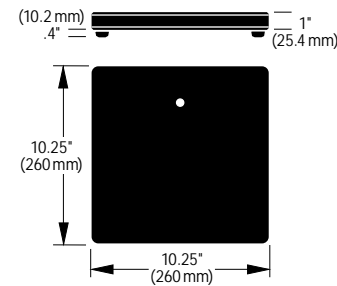
SMS25 Features



# BASE OPTIONS

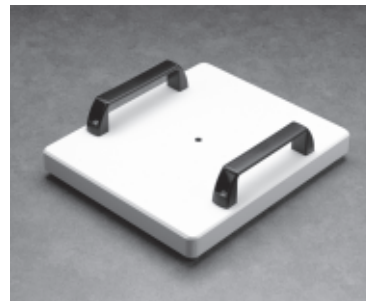
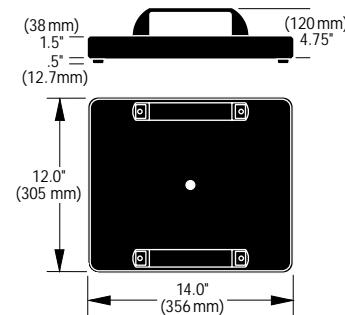
## SB1 Small Base (Not for use with SMS20 or SMS25)

This base option combines economy, quality and portability. The base is made from a 10.25" square, 1" thick steel plate which is machine finished and texture coated with durable catalyzed polyurethane paint. It is supported by non-scuffing, non-oxidizing nylon feet. This base option allows the work station to be easily moved from one bench top to another. The mounting hole accepts a 3/8"-16 socket head cap screw.



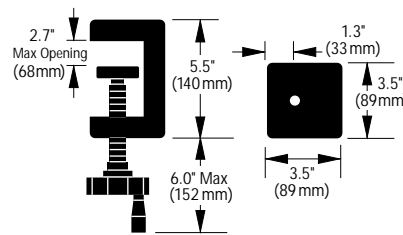
## SB3 Large Base

This base option provides the highest tipover resistance, while still providing portability. The base is made from a 12" x 14" x 1.5" thick steel plate which is machine finished and texture coated with durable catalyzed polyurethane paint. To facilitate positioning of the base, it is equipped with two handles. The base sits on non-scuffing non-oxidizing nylon feet. This base option allows the work station to be easily moved from one bench top to another. The mounting hole accepts a 3/8"-16 socket head cap screw.



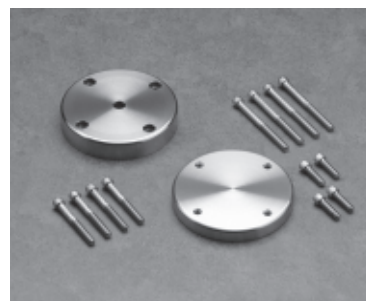
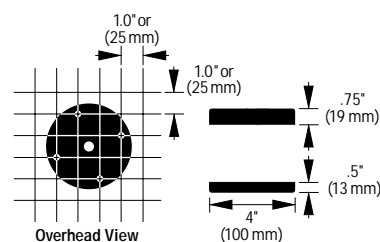
## TC2 Table Clamp

The Diagnostic Instruments Table Clamp is a solid aluminum "C" clamp design with a 1" x 3.5" web, a 3/4" diameter stainless steel clamping screw, a floating platon and a 3" diameter clamping knob. Unlike competing clamps, this clamp solidly attaches the vertical pole to the table as if it was bolted. This clamp eliminates any tipover worry, without requiring modification of the table. The finish is a texture coated, catalyzed polyurethane paint. The mounting hole accepts a 3/8"-16 socket head cap screw.



## TM1 Table Mount

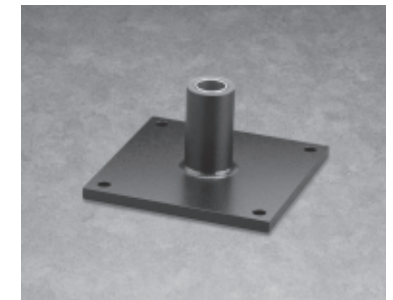
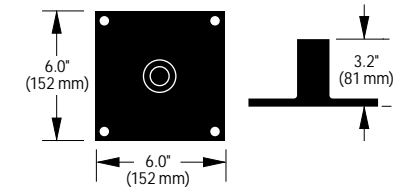
The Diagnostic Instruments Table Mount is designed to allow boom stand attachment to 1.0" or 25mm center to center tapped hole patterns like those seen on vibration isolation tables. It also comes with a backing plate to increase mounting strength on standard table tops. With this type of mount, tipover and rigidity are not concerns. The TM1 is made of solid 300 series stainless steel to match the anti-corrosion characteristics of the boom stands they support. The TM1 includes the top mounting plate, the bottom backing plate, three sets of 1/4-20 mounting fasteners (7/8", 2" & 2-3/4"), and one set of M6 x20mm mounting fasteners. The mounting hole accepts a 3/8"-16 socket head cap screw.



# BASE OPTIONS FOR SMS25 SERIES

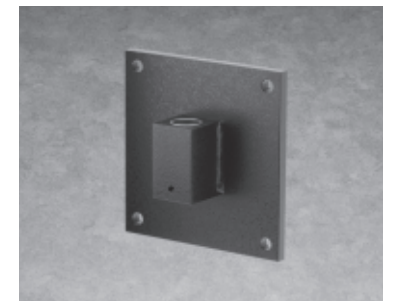
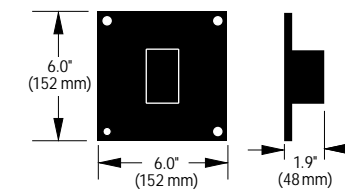
## TM25 Table Mount for SMS25

This base option is an economical way to mount the SMS25 arm to table tops. It consists of a mounting socket and a horizontal mounting plate. It should be noted that mounting fasteners are not included due to the infinite mounting possibilities. The customer should supply 3/8" diameter mounting hardware for this purpose. TM25 is texture coated with black polyurethane paint.



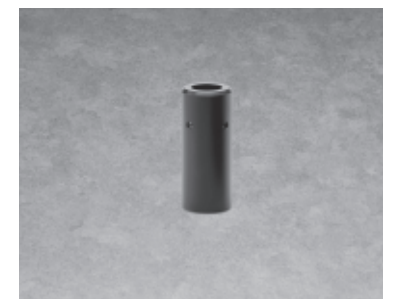
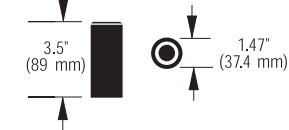
## WMT25 Wall Mount for SMS25

This base option is an economical way to mount the SMS25 arm to walls and columns. It consists of a mounting socket and a vertical mounting plate. It should be noted that mounting fasteners are not included due to the infinite mounting possibilities. The customer should supply 3/8" diameter mounting hardware for this purpose. WMT25 is texture coated with black polyurethane paint.



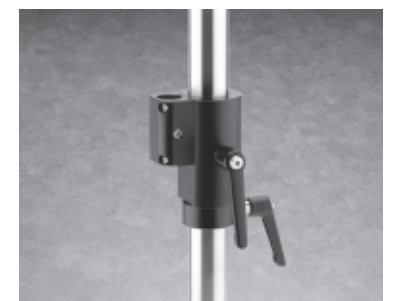
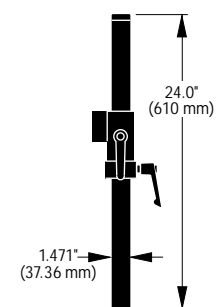
## PD25 Mounting Pedestal for SMS25

The PD25 is a mounting pedestal for the SMS25 arm. It allows the SMS25 arm to be mounted to standard base options such as the TM1, TC2 and SB3. It is also available for OEM mounting of the arm to machine bases. The pedestal is anodized aluminum and comes with a 3/8"-16 x 1-1/4" socket head cap screw.



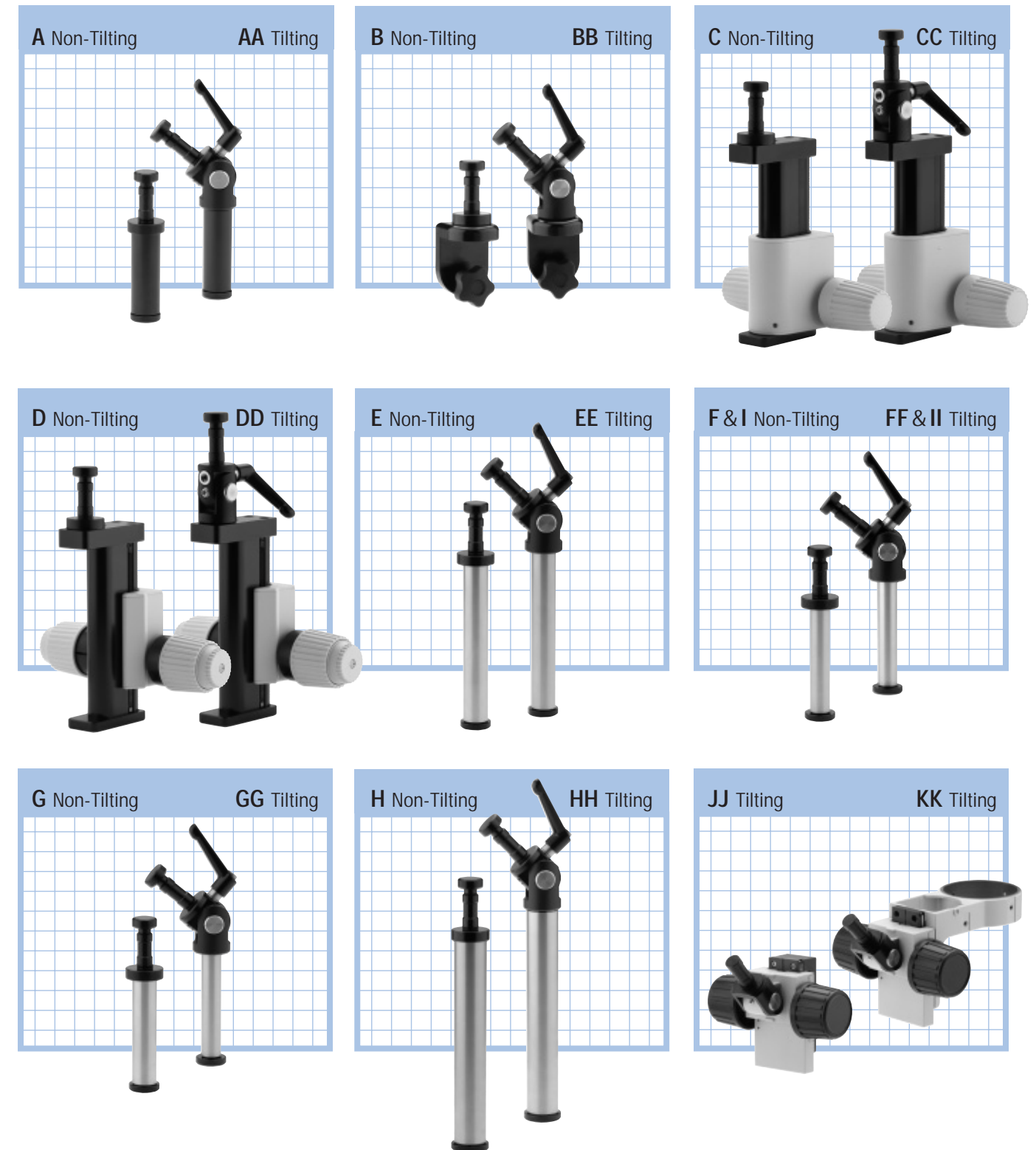
## VP25 Vertical Column and Slider for SMS25

The VP25 is a vertical column and slider mounted pedestal for the SMS25 arm. It allows the SMS25 arm to be mounted to standard base options such as the TM1, TC2 and SB3. It has the added advantage of allowing greater vertical positioning. The vertical column is precision ground 300 series stainless steel and comes with a 3/8"-16 x 1-1/4" socket head cap screw. The slider mounted pedestal and vertical stop are anodized aluminum and have lever handles for locking the height position.

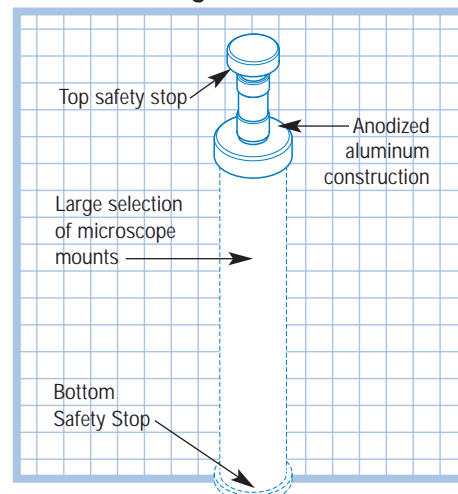


# MICROSCOPE MOUNTS

Microscopes	Non-Tilting Adapter	See Page 13	Tilting Adapter	See Page 13
<b>Aus Jena</b>				
GSZ	130	A	120	AA
<b>Camera 1/4" 20 Mount</b>				
Non-focus mount	135	B	137	BB
Focus mount	N/A	N/A	136	JJ
<b>Leica/Wild</b>				
S, MZ series; 445 615-focus drive shortened to 76 mm travel	149	C	147	CC
S, MZ series; 445 616-focus drive shortened to 76 mm travel (column provided by customer)	150	D	148	DD
M5, M7, M8, M400, M420 (25 mm Ø mounting column)	124	E	114	EE
Old style 20 mm Ø pole	143	F	144	FF
<b>Meji</b>				
Meji EMZ, EMT, EMF, EMX with F, FX and FC focus mounts	131	F	132	FF
Meji RZ series	128	H	118	HH
<b>Nikon</b>				
SMZ-1, -2B, -2T (24.5mm Ø mounting column)	126	G	116	GG
SMZ-U, SMZ-10A, SMZ645, SMZ660, SMZ800, SMZ1000, SMZ1500 (32mm Ø mounting column)	128	H	118	HH
<b>Olympus</b>				
SZ (STS-STB2 focus mount required)	126	G	116	GG
SD/SF series, SZX, SZH, SZ with SZ-STS focus mount (32mm Ø mounting column)	128	H	118	HH
BXFM			(SMS20 Stand recommended)	
<b>Rathenower</b>				
SMT-4 & SMC-4	130	A	120	AA
<b>Unitron</b>				
ZSB & ZST	126	G	116	GG
<b>Zeiss</b>				
IB, III, IV, IVB (18 mm Ø mounting column)	127	I	117	II
SV6, SV8, SV11, SR, DR, DRC, Stemi Series	128	H	118	HH
<b>Miscellaneous</b>				
Bonder focus mount to accept 76 mm stereomicroscope pods	N/A	N/A	146	KK



## Non-Tilting Mount Features



## Tilting Mount Features

