



ROSE+BOPLA
ENCLOSURES

A PHOENIX MECANO COMPANY

Machine Control Enclosures SL 2000 Product Drawings Last Updated 1/9/2006

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Dimensional Drawings

For Secondary Services, Product Support, or To Order, Call 1-301-696-9800



SL 2000 featuring console and mobile console stand.

Slim Line 2000 is the enclosure system of the future. It combines high mechanical and electromagnetic protection, numerous mounting and attachment options, with high design standards.

Slim Line 2000

Because of its flexible construction and universal mounting options, Slim Line 2000 can be used in a wide variety of applications: as an operating enclosure in machine and plant engineering, as an enclosure solution for industrial PCs and control units, and as a universal solution for flat panel display systems.

A high degree of EMC protection is a standard feature of the SL 2000 enclosure system, due to its aluminum profile design. With inner and outer T-slots, it offers perfect mounting options for electronic components and for the attachment of handles. Front panels can be mounted, either from the front or from the rear. The flat enclosure body with three available profile depths is suitable for mounting equipment up to 80, 110 or 185mm. Other depths can be created by using recessed rear panels. The SL 2000 is available either with a screw-on rear panel or with a rear door.

Due to the wide range of available accessories, numerous mounting options can be selected, like:

- attachment to Rose+Bopla suspension arm systems
- hinge attachment to machinery or wall
- panel mounting solutions.

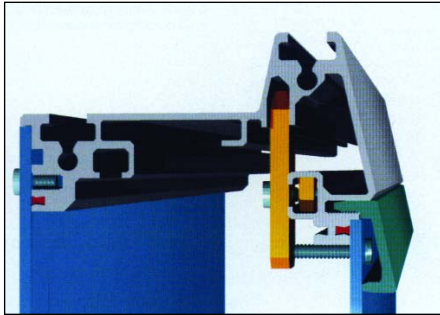
TECHNICAL DATA:

- Color: Enclosure, light gray similar to RAL 7035.
Handles, ruby red similar to RAL 3003.
- Protection Classifications: IP 65, EN 60529; NEMA 12.
- Temperature range: -22° F up to +149° F
- Material:
Enclosure profile—extruded aluminum, Al Mg Si 0.5, DIN 1725
Corner elements—diecast aluminum, Al Si 12, DIN 1725
Rear panel door—sheet metal, Al Mg 3, DIN 1725
Cover profile—thermoplastic material
- Finish: powdercoating

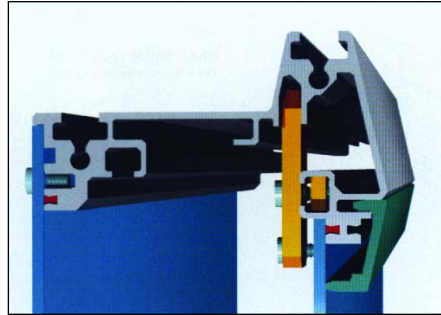
▶
Motems are available for the SL 2000. These mobile console stands are offered in three versions: a fixed design; a manually adjustable version; and an electronically adjustable model.



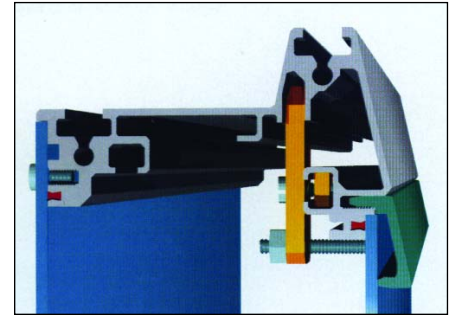
Front Panel Mounting Options



Front panel mounting from the front

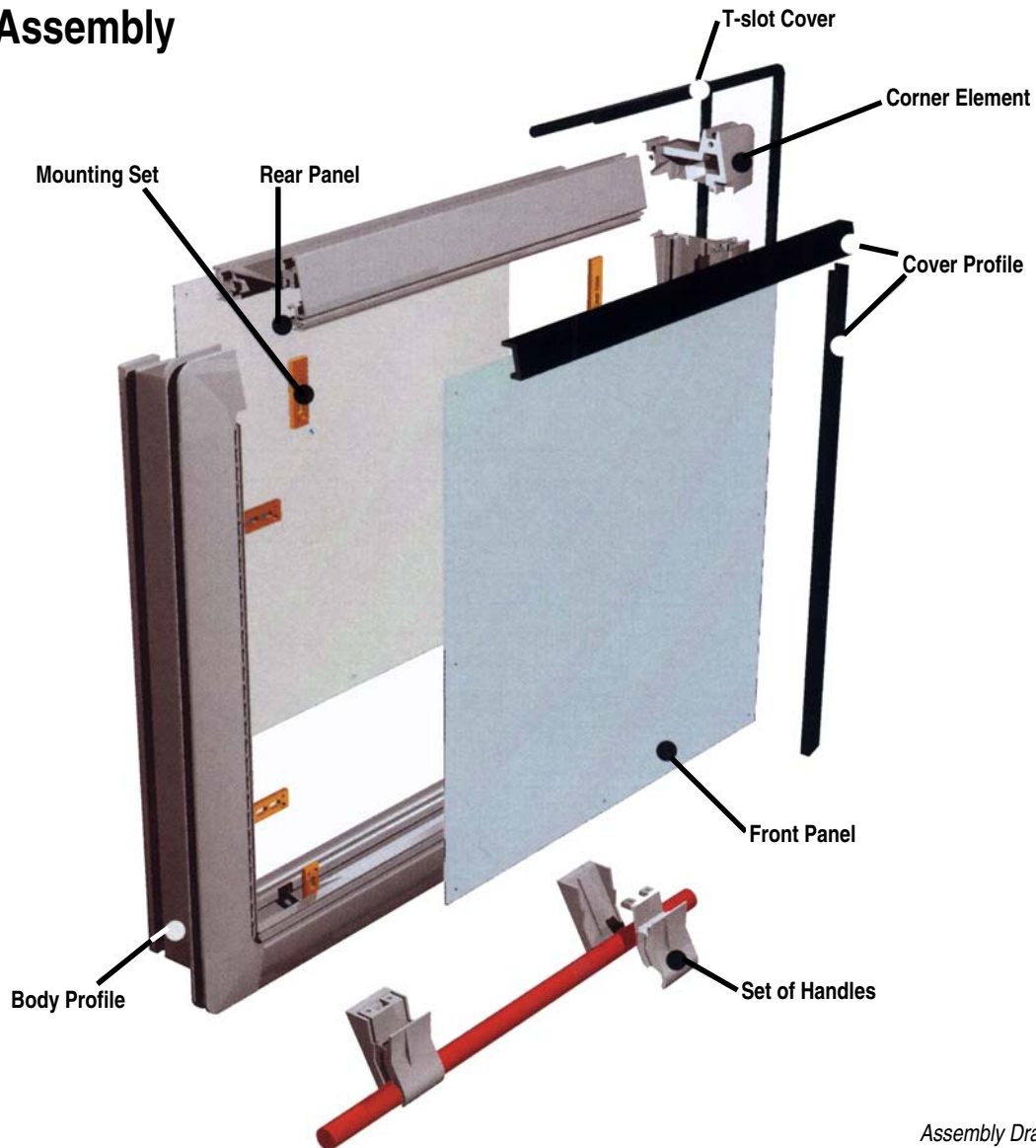


Front panel mounting from the rear



Front panel mounting with stud bolts

SL 2000 Assembly



Assembly Drawing, Page 15-210

SL 2000 Accessories

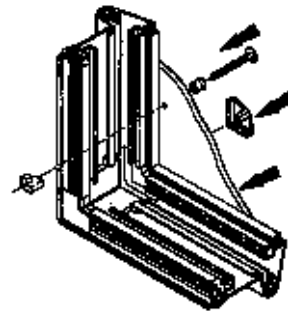
Slim Line 2000 Machine Control Enclosure		
Item	Description	Drawing Page #
Profile 1	Extruded Aluminum, 80 mm max. mounting depth	17-231
Profile 2	Extruded Aluminum, 110 mm max. mounting depth	17-231
Profile 3	Extruded Aluminum, 185 mm max. mounting depth	17-231
Standard Accessories for Profiles 1, 2, and 3		
Part Number	Description	
19590020 00	Standard linking bar, one meter length, for split panels	
19601004 00	Keyboard holder	
19601008 00	Set of (2) hinges with screws	
19601001 00	Panel mounting set with (12) screws, spring nuts, brackets	
19601002 00	Fastening set (30) spring nuts, brackets, screws	
19601007 00	Quick fastening kit for front plate	
10036001 00	Set of M5 mounting nuts (8 pcs.)	
19590011 00	Console mounting kit, 15° fixed	
19590012 00	Console mounting kit, 30° fixed	
19590013 00	Console mounting kit, adjustable	
19601005 00	Floppy disk drive mounting bay	
19602004 00	Handle set (1 handle with brackets), 301mm long for side attachment.	
19602005 00	Handle set (1 handle with brackets), 345mm long for side attachment.	
19602006 00	Handle set (1 handle with brackets), 472mm long for side attachment.	
19602002 00	Corner handle set (1 L-shaped handle w/brackets) (3) 556/395 asymmetrical for side/bottom attachment	



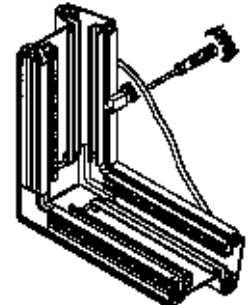
◀ **SL Mounting Sets**
are used to mount internal components.

19601001 00
Mounting Set 1

19601002 00
Mounting Set 2



◀ **19601007 00**
SL Quick Mounting Set



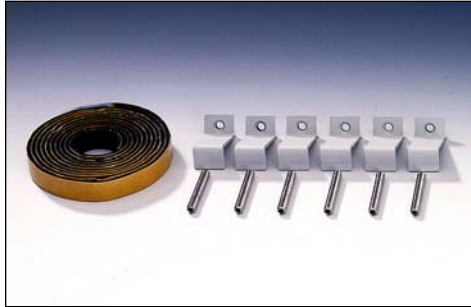
Flange Coupling Adapters for Mounting to Rose+Bopla Suspension Arm Systems—4945, 4949, 4951, 4961, 4981

Coupling Adapters for Suspension Arm Systems 4945, 4949	
Part Number	Description
19602003 00	For 80mm profile 1
19602011 00	For 110mm profile 2
19602012 00	For 185mm profile 3
Coupling Adapters for Suspension Arm Systems 4951, 4961, 4981	
19602007 00	For 110mm profile 2
19602008 00	For 185mm profile 3
19602013 00	For 185 mm profile 3



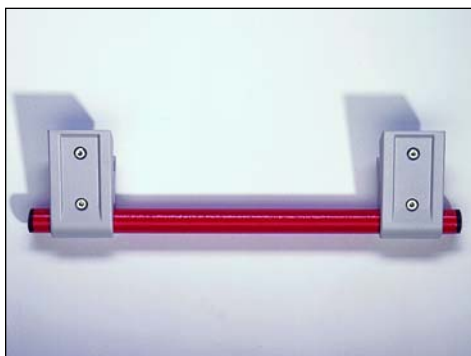
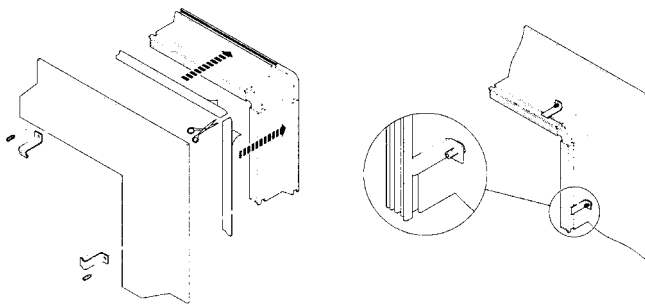
◀ **Slim Line 2000 Flange Coupling**
for mounting SL 2000 profiles to Rose+Bopla Suspension Arm Systems.

SL 2000 Accessories



◀ **SL Panel Mounting Set**
for integrating the SL 2000 into control panels.

19601000 00
Includes fittings, sealing ring, and screws.



◀ **SL Handle Set**
consisting of tube and fittings

19602002 00
Asymmetrical
19602004 00
Side Attachment
19602005 00
Side Attachment
19602006 00
Side Attachment

SL 2000 Ordering Guide Instruction Sheet



1. Begin to fill in your SL 2000 part number as 19__ by going down through the SL 2000 Ordering Guide and filling in or circling the required items. You will build a 10-digit part number.
2. Coupling Hole—circle yes if you will be using a suspension coupling adapter.
3. Coupling Hole Location—select from...top, bottom, left, right. Also circle location guide

in top left hand corner of ordering guide sheet.

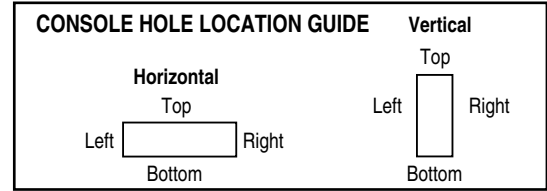
- 4. Install Adapter**—circle yes if you would like us to install the coupling adapter.
- 5. Write in the Rose+Bopla flange coupling part number** being used if any.
- 6. Select Profile**—your profile choice will depend on your required depth. See drawings and keep in mind that your front plate will affect this choice.
- 7. Usable Panel Space**—fill in the usable panel space (in mm) you will need for your control or display panel.
- 8. Actual Panel Size**—take your usable space and add 34mm to arrive at this figure.
- 9. Usable Depth**—Check your supplied drawings to get this figure. Note: mounting your front plate from the front or rear will affect this dimension.
- 10. External Size**—take your actual panel size and add 95.6mm to the height and width to arrive at these circumference dimensions.
- 11. Door/Rear Panel**—you have a choice of a screwed-on rear panel or a hinged door. Please circle your choice and also the desired hinge locations.
- 12. Front Panel**—Circle your choice of front panel/finish and installation method.
- 13. Machining**—Please circle if you would like for us to machine/engrave your panels. if yes, please supply us with your drawing number and fax us a copy for review.
- 14. Silkscreen**—Rose+Bopla can provide complete silkscreen services. If you would like this service we will need a drawing for placement and artwork to create the screen.
- 15. Handles**—Please provide the part number and location for the handle style you have chosen. Keyboard Holder and Console Mounting Kit are available options. Note: A handle set consists of one handle and the required number of brackets.
- 16. Rose+Bopla will install** front bezel material and outside protective rubber unless specified otherwise.
- 17. Notes**—please fill in any special notes or instructions for building the unit.
- 18. After design review**, a copy of the ordering guide will be faxed to you for final approval and signature.

Note: For units with a console, please also fill out the "Console Ordering Guide" using these same guidelines.



SL 2000 Ordering Guide

Start at the top of this guide and work down, considering all options required. Circle required options and corresponding part numbers. You will build a 10 digit part number, eg., 19020002 01, plus assembly options. Then, call a Rose+Bopla sales person and they will give you pricing, internal dimensions and coupling hole options for the enclosure you designed.

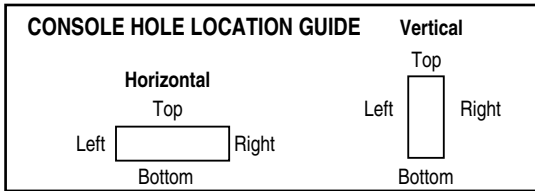


Please Circle All Items Required

NOTE: One Inch equals 25.4 mm

DESCRIPTION	FLANGE COUPLING ADAPTER REQUIRED	COUPLING PART NUMBER	CONSOLE BOOT LOCATION	ROSE P.N.
COUPLING HOLES <input type="checkbox"/> YES <input type="checkbox"/> NO COUPLING HOLE LOCATION INSTALL ADAPTER <input type="checkbox"/> YES <input type="checkbox"/> NO	4945 & 4949 Suspension Systems 19602003 - 80mm Profile 19602011 - 110mm Profile 19602012 - 185mm Profile 4951 & 4961 Suspension Systems 19602007 - 110mm Profile 19602008 - 185mm Profile Price of Adapter Not Included		Top Left Bottom Right N / A	19
SELECT PROFILE	Profile #1 - 80 mm Profile #2 - 110 mm Profile #3 - 185 mm			01 02 03
ENCLOSURE HEIGHT / WIDTH	CIRCUMFERENCE	HEIGHT	WIDTH	
	Actual Panel Size + 95.6mm = External Height and Width			
Usable Panel Space Required Height: _____ Width: _____	0 - 1200mm	_____ mm	_____ mm	0001
Actual Panel Size (Usable Panel Space + 34mm) Height: _____ Width: _____	1201 - 1800mm	_____ mm	_____ mm	0002
Usable Depth: _____ Refer to SL 2000 Drawing	1801 - 2300mm	_____ mm	_____ mm	0003
	2301 - 2800mm	_____ mm	_____ mm	0004
	2801 - 3300mm	_____ mm	_____ mm	0005
DOORS	Rear Panel Rear Door	Hinge Location, if required (facing the unit). Top Left Bottom Right		00 01
FRONT PANEL (Circle One) No Front Panel Clear Anodized Mill Finish / Painted	Install Panel Gasket <input type="checkbox"/> YES <input type="checkbox"/> NO	Install Front Panel: (Circle One)	YES or NO From Front From Front W / Studs From Rear	
MACHINING <input type="checkbox"/> YES <input type="checkbox"/> NO	Machine to DWG #			
SILK SCREENING <input type="checkbox"/> YES <input type="checkbox"/> NO	Silk Screen to DWG #			
HANDLES <input type="checkbox"/> YES <input type="checkbox"/> NO	Type Dual Side Handles Corner Handles Console Mounting Kit	Installed Yes - No Yes - No Yes - No	Handle Location Horizontal or Vertical	
	Prices of Handles Not Included			
INSTALL	Front Bezel	Black T-Slot Gasket	Optional: Keyboard Holder	
NOTES OR SPECIAL INSTRUCTIONS:				CONSOLE REQUIRED <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, PROCEED TO NEXT PAGE

SL 2000



Start at the top of this guide and work down, considering all options required. Circle required options and corresponding part numbers. You will build a 10 digit Rose part number, eg., 19010001 00, plus assembly options. Then call a Rose+Bopla sales person and they will give you pricing, internal dimensions and coupling hole options for the enclosure you designed.

Please Circle All Items Required

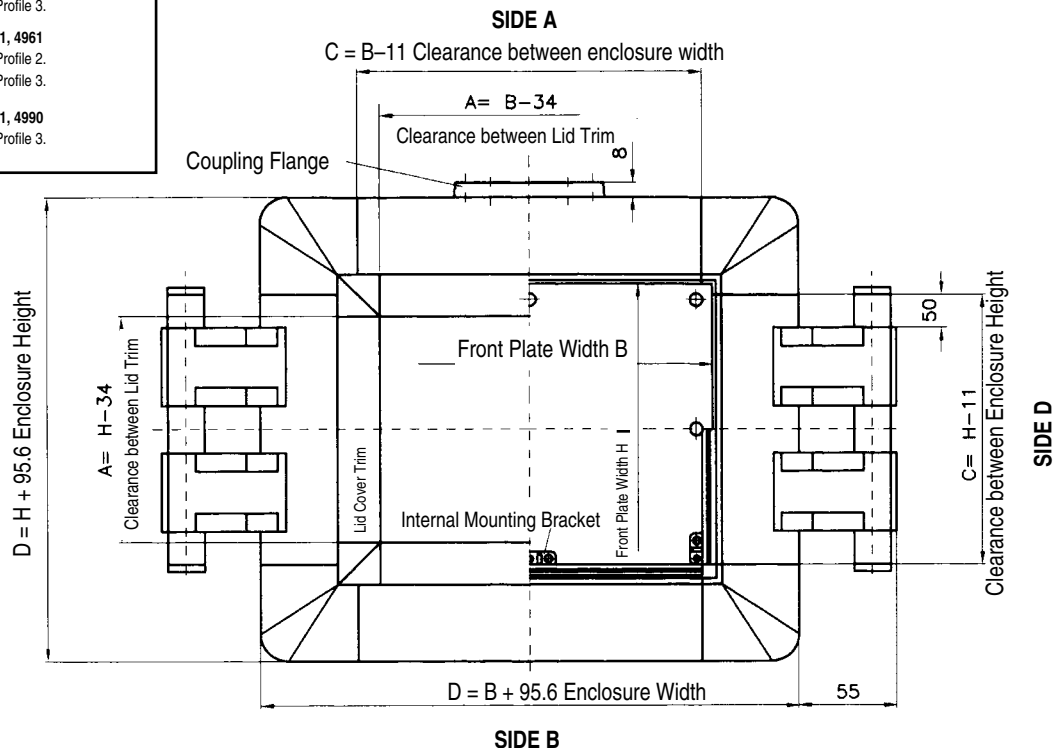
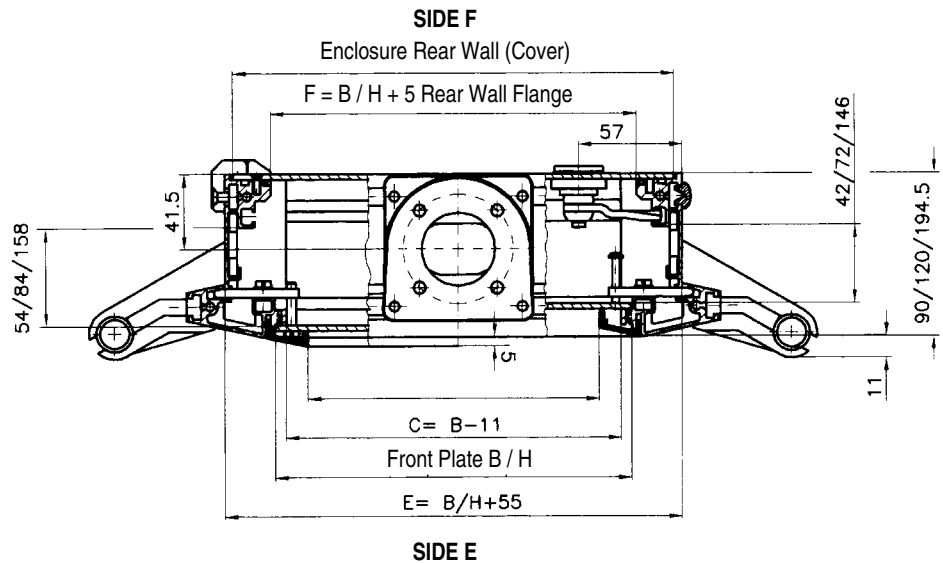
NOTE: One Inch equals 25.4 mm

DESCRIPTION	FIXED CONSOLE MOUNTING KIT	CONSOLE MOUNTING KIT LOCATION	ROSE P.N.
CONSOLE MOUNTING KIT-HANDLES <input type="checkbox"/> YES <input type="checkbox"/> NO INSTALL MOUNTING KIT-HANDLES <input type="checkbox"/> YES <input type="checkbox"/> NO	19590011 00 15 Degree Angle 19590012 00 30 Degree Angle 19590013 00 Variable / Adjustable Price of Mounting Kit Not Included	Top Left Bottom Right	19
SELECT PROFILE	Profile #1 - 80 mm Profile #2 - 110 mm Profile #3 - 185 mm		01 02 03
ENCLOSURE HEIGHT / WIDTH	CIRCUMFERENCE	HEIGHT	WIDTH
	Actual Panel Size + 95.6mm = External Height and Width		
Usable Panel Space Required Height: _____ Width: _____	0 - 1200mm	_____ mm	_____ mm
Actual Panel Size (Usable Panel Space + 34mm) Height: _____ Width: _____	1201 - 1800mm	_____ mm	_____ mm
Usable Depth: _____ Refer to SL 2000 Drawing	1801 - 2300mm	_____ mm	_____ mm
	2301 - 2800mm	_____ mm	_____ mm
	2801 - 3300mm	_____ mm	_____ mm
DOORS	Rear Panel Rear Door	Hinge Location, if required (facing the unit). Top Left Bottom Right	00 01
FRONT PANEL (Circle One) No Front Panel Clear Anodized Mill Finish / Painted	Install Panel Gasket <input type="checkbox"/> YES <input type="checkbox"/> NO	Install Front Panel: (Circle One) From Front From Front W / Studs From Rear	YES or NO
MACHINING <input type="checkbox"/> YES <input type="checkbox"/> NO	Machine to DWG #		
SILK SCREENING <input type="checkbox"/> YES <input type="checkbox"/> NO	Silk Screen to DWG #		
HANDLES <input type="checkbox"/> YES <input type="checkbox"/> NO	Type Dual Side Handles Corner Handles	Installed Yes - No Yes - No	Handle Location Horizontal or Vertical
INSTALL	Front Bezel	Black T-Slot Gasket	Optional: Keyboard Holder
NOTES OR SPECIAL INSTRUCTIONS:			

Assembly Drawings

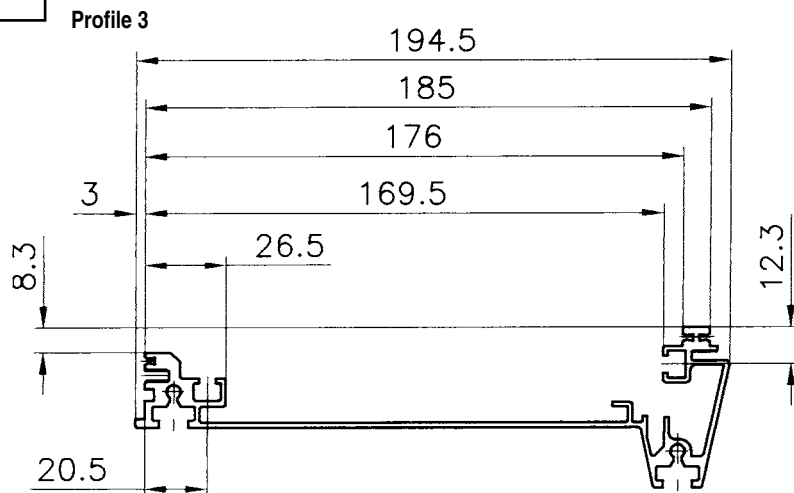
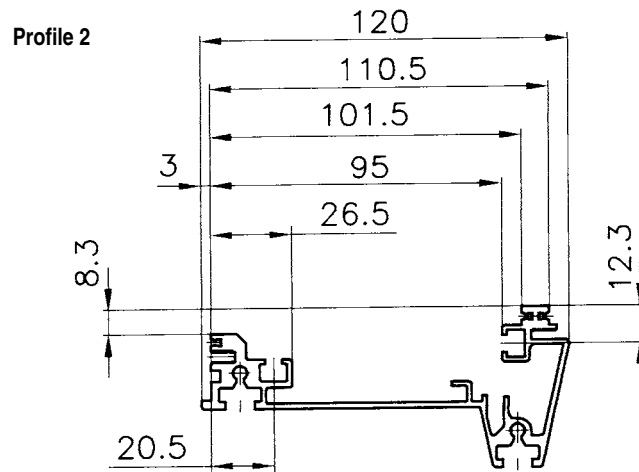
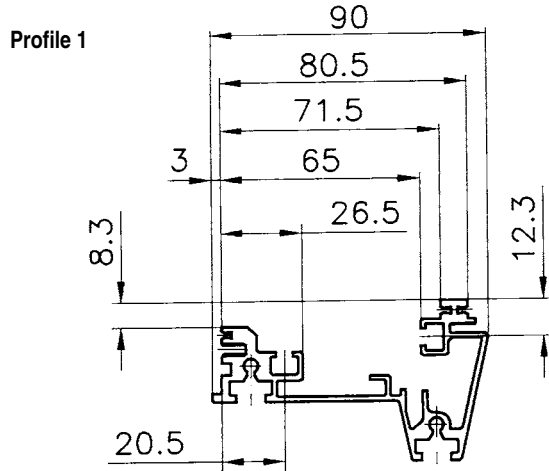
Standard Features
<ul style="list-style-type: none"> • Profile 1 Extruded Aluminum, 80 mm maximum mounting depth. • Profile 2 Extruded Aluminum, 110 mm maximum mounting depth. • Profile 3 Extruded Aluminum, 185 mm maximum mounting depth.
Accessories
<ul style="list-style-type: none"> • 19590020 00 Standard linking bar, one meter length, for split panels. • 19601004 00 Keyboard holder. • 19601008 00 Set of (2) hinges with screws. • 19601001 00 Panel mounting set with (12) screws, spring nuts, brackets. • 19601002 00 Panel mounting set (30 spring nuts, brackets, screws). • 19601007 00 Quick fastening kit for front panel. • 10036001 00 Set of M5 mounting nuts. • 19590011 00 Console mounting kit, 15° fixed. • 19590012 00 Console mounting kit, 30° fixed. • 19590013 00 Console mounting kit, adjustable. • 19601005 00 Floppy disk drive mounting bay. • 19601009 00 Document holder mounts on side handle. • 19602001 00 Handle set 256mm for side attachment. • 19602004 00 Handle set (1 handle w/brackets), 301mm long for side attachment. • 19602005 00 Handle set (1 handle w/brackets), 345mm long for side attachment. • 19602006 00 Handle set (1 handle w/brackets), 472mm long for side attachment. • 19602002 00 Corner handle set (1 L-shaped handle w/brackets) (3) 556/395 asymmetrical for side/bottom attachment.
<p>Flange Coupling Adapters for use in Rose+Bopla Suspension Systems</p> <p>Coupling Adapter for 4945, 4949</p> <ul style="list-style-type: none"> • 19602003 00 For 80 mm Profile 1. • 19602011 00 For 110 mm Profile 2. • 19602012 00 For 185 mm Profile 3. <p>Coupling Adapter for 4951, 4961</p> <ul style="list-style-type: none"> • 19602007 00 For 110 mm Profile 2. • 19602008 00 For 185 mm Profile 3. <p>Coupling Adapter for 4981, 4990</p> <ul style="list-style-type: none"> • 19602013 00 For 185 mm Profile 3.

SL 2000 Assembly Drawing



Dimensional Drawings

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<ul style="list-style-type: none"> • Profile 1 Extruded Aluminum, 80 mm maximum mounting depth. • Profile 2 Extruded Aluminum, 110 mm maximum mounting depth. • Profile 3 Extruded Aluminum, 185 mm maximum mounting depth.
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Accessories

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- 19601007 00 Quick fastening kit for front panel.
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Flange Coupling Adapters for use in Rose+Bopla Suspension Systems

Coupling Adapter for 4945, 4949

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- 19602011 00 For 110 mm Profile 2.
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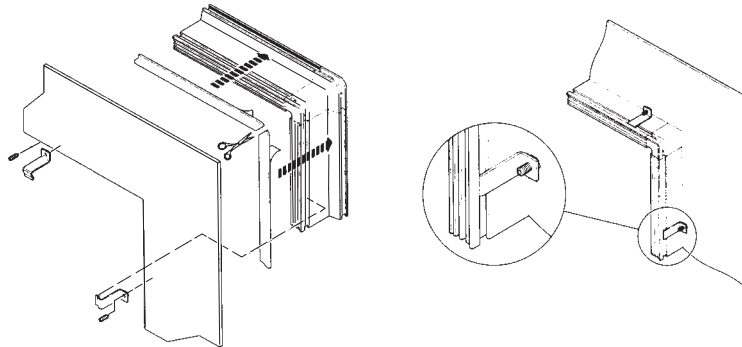
Coupling Adapter for 4951, 4961, 4981

- 19602007 00 For 110 mm Profile 2.
- 19602008 00 For 185 mm Profile 3.
- 19602013 00 For 185 mm Profile 3.

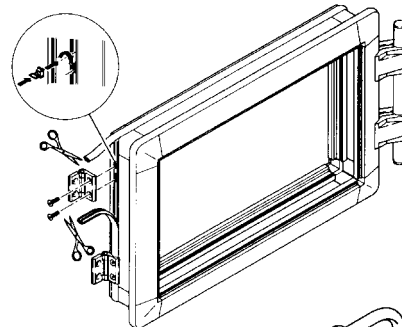
Coupling Adapter for 4981, 4990

- 19602013 00 For 185 mm Profile 3.

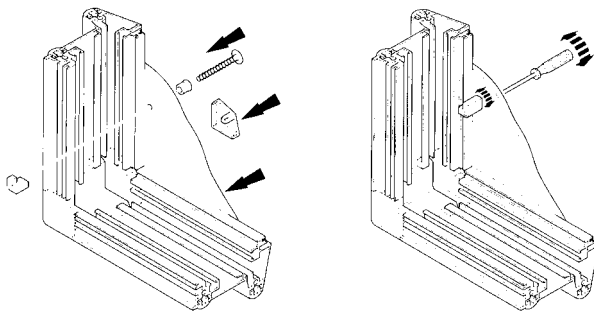
SL Panel Mounting Kit



Hinge Set



SL Quick Mounting Set



Disk Drive Mounting Bay

