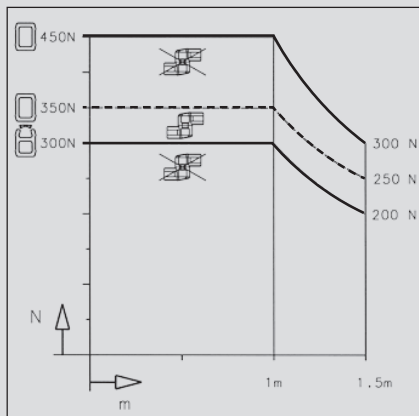


Light-Duty Suspension System CS-2000 SL 45 / 60

The CS-2000 SL light-duty suspension system is specially designed for accepting small, lightweight control enclosures and features short extension arms. In addition to the components in light grey RAL 7035, a new version in white aluminium RAL 9006 is now available that elegantly complements our CC-3000, CC-4000 / CC-4000 SL and CC-5000 neXt control enclosures (see page 72 onwards).

System structure

Individual components of the suspension system are combined with an optionally closed or partially open aluminium connection section to achieve the required configuration in accordance with the load diagram (with the exception of panel couplings).



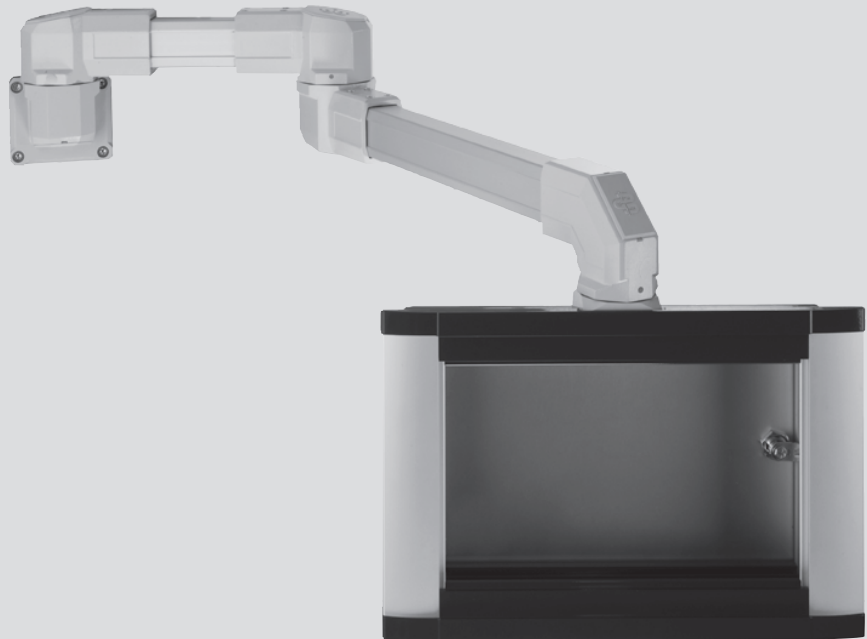
Load diagram

The above diagram shows the load bearing capacity of the CS-2000 SL range of suspension systems (with the exception of panel couplings).

The load bearing capacity of the system changes depending on the type of connecting section used (partially open or closed) or whether an intermediate joint is used.

The following safety factor generally applies: With an additional load of 75 kg, the suspension system can be subjected to load for 5 seconds without plastic deformation occurring.

The overview on pages 104 / 105 is designed to help you determine the load bearing capacity of all BERNSTEIN suspension systems.



CS-2000 SL Standard
RAL 7035 light grey or
RAL 9006 white aluminium

Materials

- Components: cast aluminium
- Installation opening: POM
- Bearing: POM
- Seals: CR
- Extruded aluminium connecting section
- Connecting section covers on open section: EPDM

Colours

- Suspension system components:
light grey RAL 7035
alternatively: white aluminium RAL 9006
- Connecting section:
silver (natural) anodised

System features

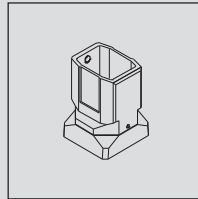
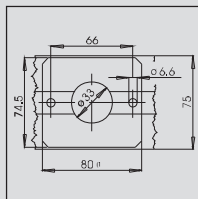
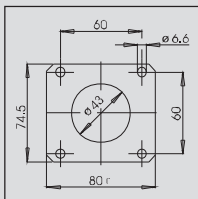
Installation opening at all joints

- Optionally closed or open connecting section can be used
- Clear passage opening in closed system:
 $\varnothing 40 \text{ mm} = 12.5 \text{ cm}^2$ at narrowest point (bearing opening)
- Clear passage opening in partially open system:
– 2.76 cm^2 at narrowest point (entry of section in components)
– 7.40 cm^2 in closed tube
- Easily retrofittable swivel angle limitation on couplings and joints
- Couplings have a small narrow flange for mounting on very narrow enclosures
- Overhead installation of all components possible
- Protection class IP 65 (closed aluminium connection section)

Enclosure preparation for mounting couplings

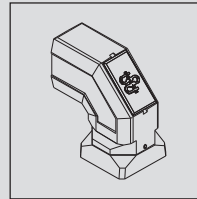
The geometry of the flange on the straight coupling and on the elbow coupling makes it possible to mount even extremely narrow enclosures. Two centrally arranged threads, with which the coupling is secured to narrow enclosures, are additionally provided for this purpose.

However, the coupling is mounted as standard by means of the four outer flange mounting threads, compatible and interchangeable with the flange mounting pattern of the CS-3000 suspension system. With a diameter of 43 mm, the hole for the cable leadthrough is adapted to the narrowest point in the suspension system (a minimum diameter of 40 mm is available in the bearing opening in the components).



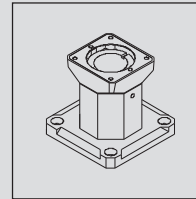
Straight coupling

Article number
1015163000
1015328000



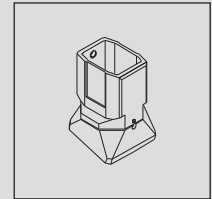
Elbow coupling

Article number
1015165000
1015329000



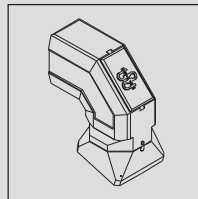
Base coupling

Article number
1015167000
1015343000



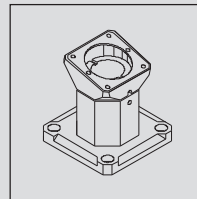
Tilt coupling

Article number
1015164000
1015330000



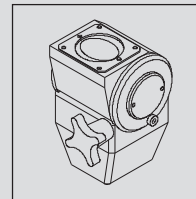
Tilt elbow coupling

Article number
1015166000
1015331000



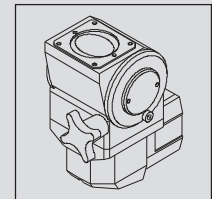
Tilt base coupling

Article number
1015168000
1015344000



Turn / tilt coupling

Article number
1015169000
1015332000

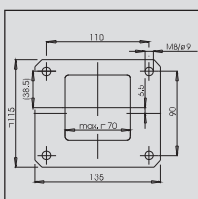


Turn / tilt elbow coupling

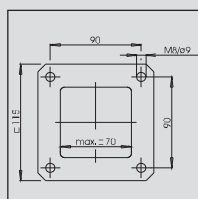
Article number
1015170000
1015333000

Machining mounting surfaces for suspension systems

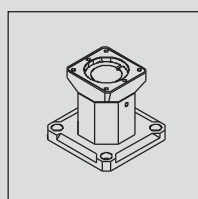
The various elements of the suspension systems can be mounted on walls or floors as well as on or at machines and systems. The corresponding machining drawings for the individual system components of the suspension system are shown here.



Wall joints

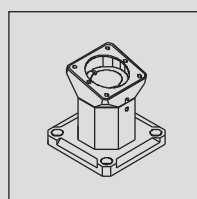


Base and top joint components



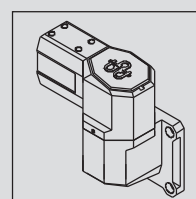
Base coupling

Article number
1015167000
1015343000



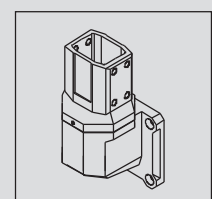
Tilt base coupling

Article number
1015168000
1015344000



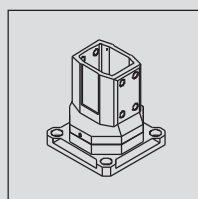
Wall joint, horizontal outlet

Article number
1015176000
1015339000



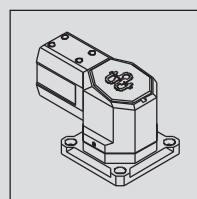
Wall joint, vertical outlet

Article number
1015177000
1015338000



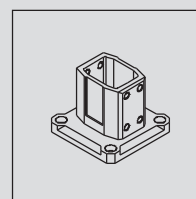
Rotary base

Article number
1015178000
1015341000



Top joint

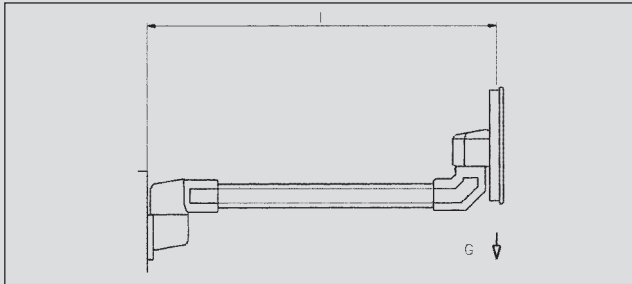
Article number
1015175000
1015340000



Base / wall flange

Article number
1015179000
1015342000

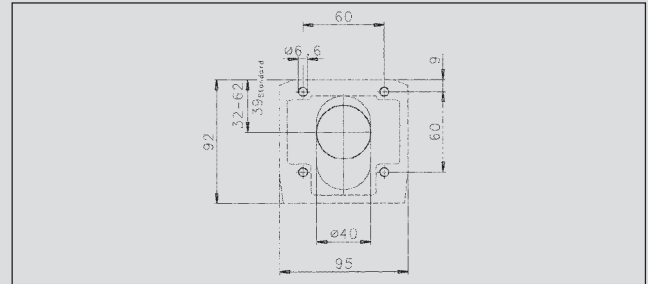
Light-Duty Suspension System CS-2000 SL 45 / 60



Load, panel components

Mechanical properties

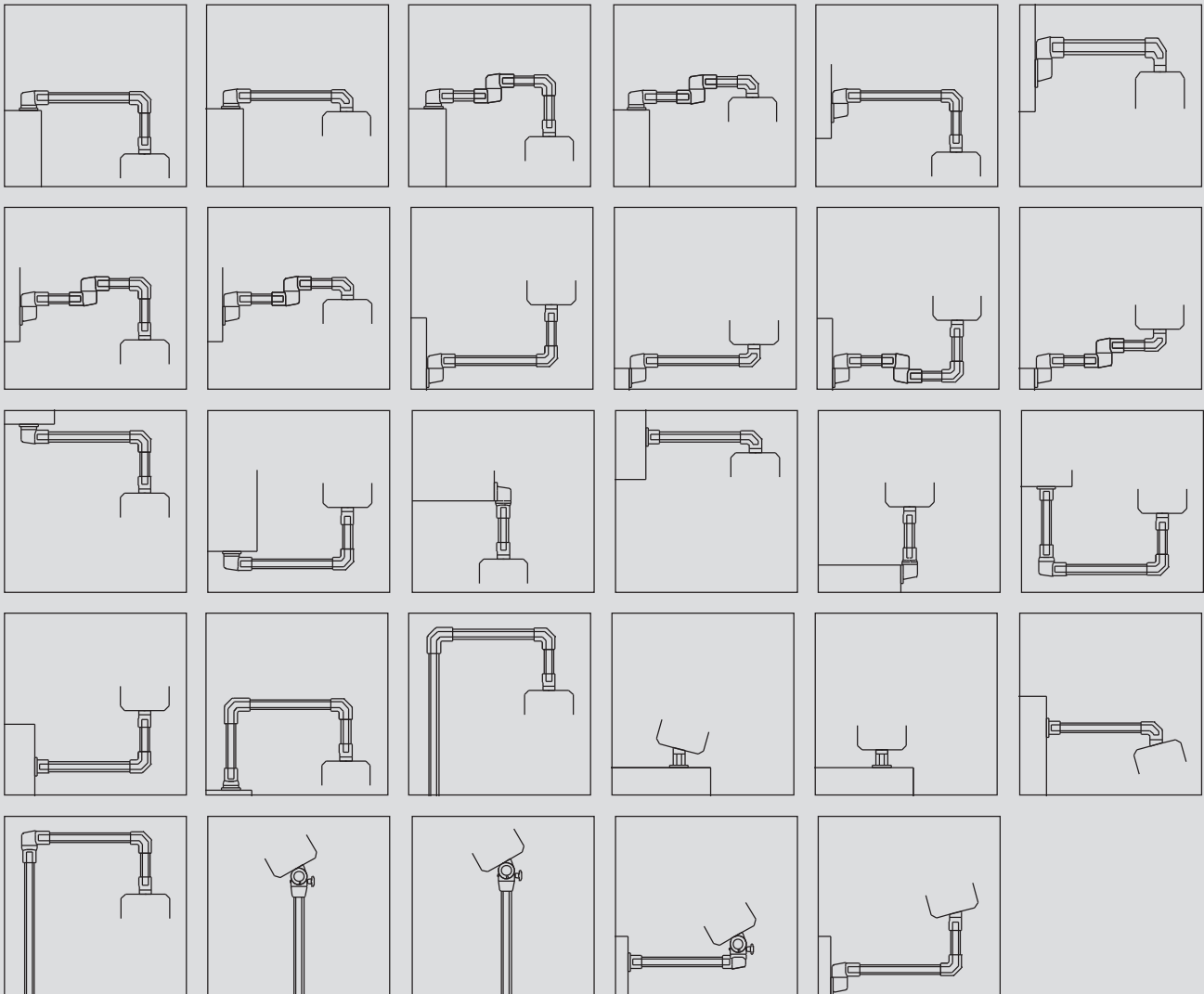
| | |
|----------------------|---------|
| Max. load G | 250 N |
| Max. System length L | 1500 mm |



Drawing for preparing enclosure rear panel
for attaching panel couplings

System combinations

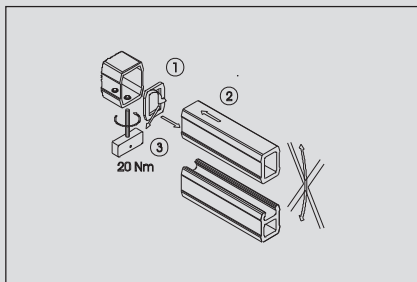
The large number of components and different versions of the connecting sections enable many different combinations. A selection of the possible configuration is shown below



Connecting Section CS-2000 SL 45 / 60

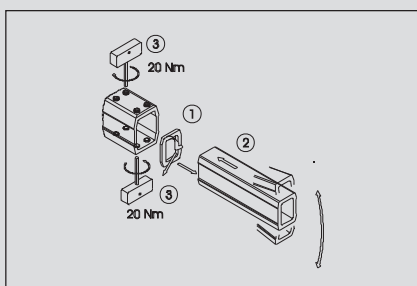


Assembling the connecting sections



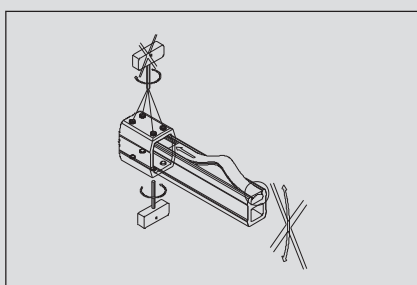
[A] Open or closed section in straight coupling and elbow coupling:

Adhere seal to connecting section (1), fit connecting section in suspension system component (2, 3).



[B] Closed section in suspension system components with eight mounting screws:

Adhere seal to connecting section (1), fit connecting section in suspension system component (2, 3) while adjusting the section.



[C] Open section in suspension system components with eight mounting screws:

Adhere seal to connecting section, fit connecting section in suspension system component, only fit the four mounting screws on the closed part of the tubing, install cover seal.

Connecting sections

The connecting section is a drawn aluminium AlMgSi 0.5 bar.

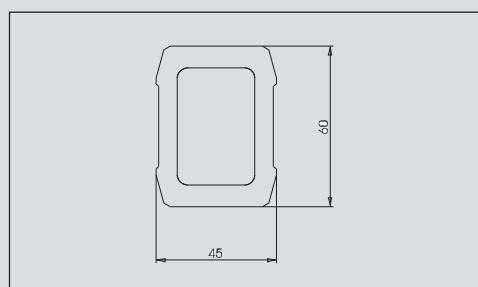
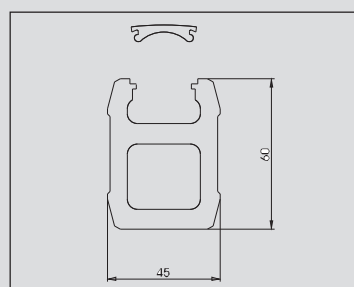
The surface is anodised and therefore corresponds to a colour similar to RAL 9006.

The connecting section can be used both in open as well as in completely closed cable ducts. The partly open section has an EPDM cover, coloured similar to RAL 7042.

This flexible plastic cover can be easily withdrawn and reinserted.

| Open section | |
|-----------------|----------------|
| Dimensions (mm) | Article number |
| 45 x 60 x 250 | 9524001000 |
| 45 x 60 x 500 | 9524002000 |
| 45 x 60 x 750 | 9524003000 |
| 45 x 60 x 1000 | 9524004000 |
| 45 x 60 x 1250 | 9524005000 |
| 45 x 60 x 1500 | 9524006000 |
| 45 x 60 x 2000 | 9524008000 |

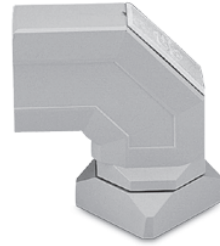
| Closed section | | |
|-----------------|----------------|---------------|
| Dimensions (mm) | Article number | Weights in kg |
| 45 x 60 x 250 | 9524301000 | 0.90 |
| 45 x 60 x 500 | 9524302000 | 1.80 |
| 45 x 60 x 750 | 9524303000 | 2.60 |
| 45 x 60 x 1000 | 9524304000 | 3.50 |
| 45 x 60 x 1250 | 9524305000 | 4.40 |
| 45 x 60 x 1500 | 9524306000 | 5.20 |
| 45 x 60 x 2000 | 9524308000 | 6.90 |



You will find an aid for selecting the load bearing capacity on pages 104 / 105.

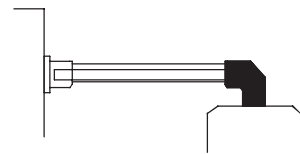
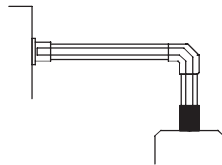
Light-Duty Suspension System CS-2000 SL 45 / 60

| Article | Straight coupling CS-2000 SL | | Elbow coupling CS-2000 SL | |
|-------------------------|------------------------------|--------------------------|---------------------------|--------------------------|
| Article number (colour) | 1015163000 | RAL 7035 light grey | 1015165000 | RAL 7035 light grey |
| | 1015369000 | RAL 9006 white aluminium | 1015370000 | RAL 9006 white aluminium |

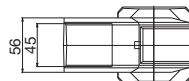
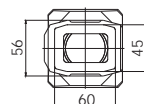
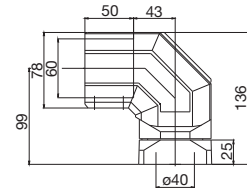
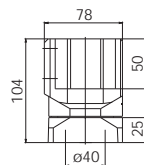
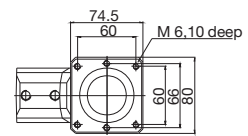
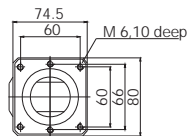


| | | |
|---------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Details | Angle of rotation 300° with stop. Complete with installation material and seals | Installation opening with snap-on plastic cover. Angle of rotation 300° with stop. Complete with installation material and seals |
| Weight in g | 740 | 960 |
| Material | Aluminium | Aluminium |
| Accessories (retrofitable) see pages 154 / 155 | Swivel angle limiter 9805129000 | Swivel angle limiter 9805129000 |

Application example



Dimensions in mm



CAD files available
at www.bernstein.eu

Turn / tilt coupling CS-2000 SL

1015169000 RAL 7035 light grey
1015371000 RAL 9006 white aluminium


Turn / tilt elbow coupling CS-2000 SL

1015170000 RAL 7035 light grey
1015372000 RAL 9006 white aluminium


Tilt coupling CS-2000 SL

1015164000 RAL 7035 light grey
1015373000 RAL 9006 white aluminium



Angle of rotation 300° with stop. Infinitely variable inclination from 0 to 30°. Complete with installation material and seals. Enclosure max. 300 N

3000
 Aluminium

Swivel angle limiter 9805130000

Angle of rotation 300° with stop. Infinitely variable inclination from 0 to 30°. Complete with installation material and seals. Enclosure max. 300 N

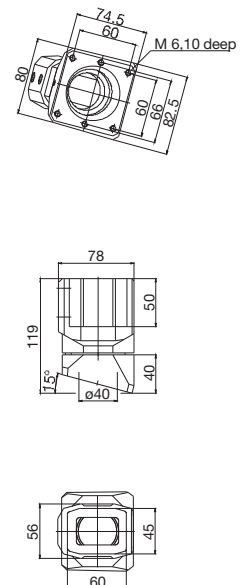
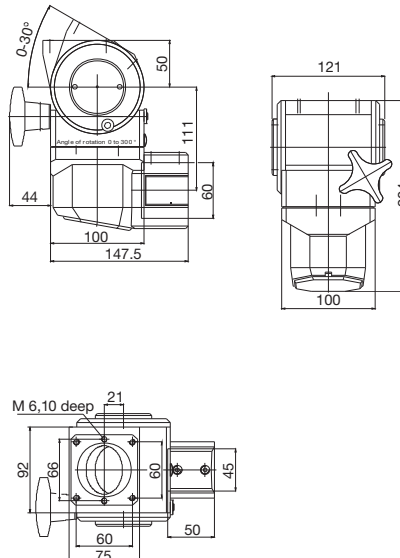
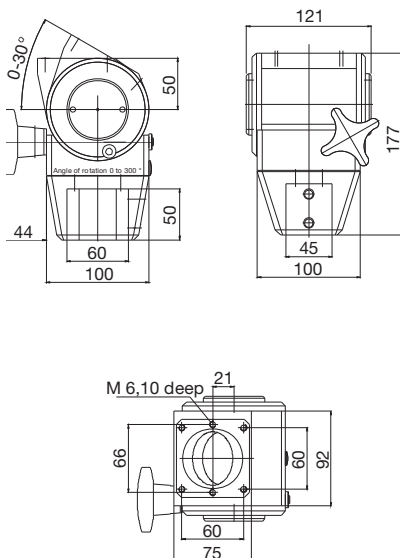
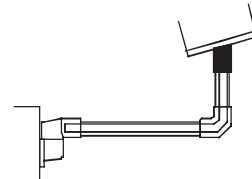
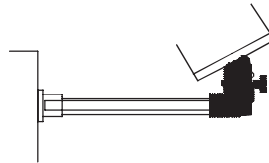
3300
 Aluminium

Swivel angle limiter 9805130000

Tilt angle 15°. Angle of rotation 300° with stop. Complete with installation material and seals

1100
 Aluminium

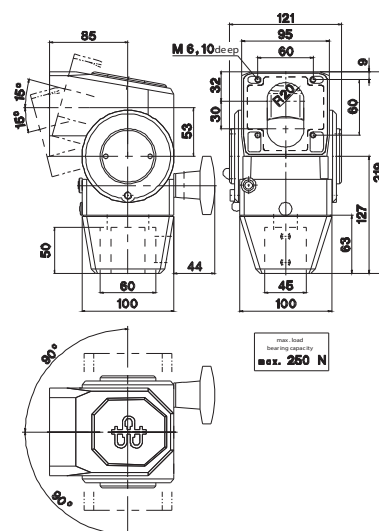
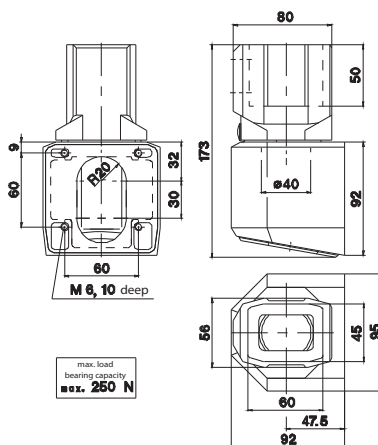
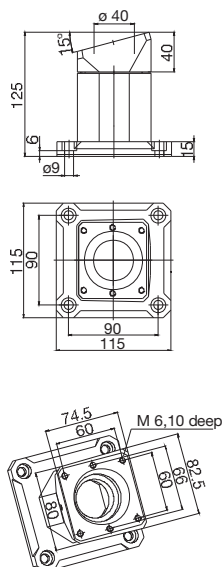
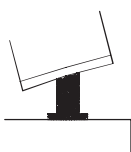
Swivel angle limiter 9805129000



| Tilt base coupling CS-2000 SL | | Panel coupling | | Panel turn / tilt coupling S | |
|-------------------------------|--------------------------|----------------|--------------------------|------------------------------|--------------------------|
| 1015168000 | RAL 7035 light grey | 1015232000 | RAL 7035 light grey | 1015235000 | RAL 7035 light grey |
| 1015376000 | RAL 9006 white aluminium | 1015377000 | RAL 9006 white aluminium | 1015378000 | RAL 9006 white aluminium |

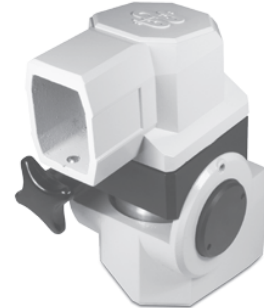


| | | |
|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Angle of rotation 300° with stop. Fixed inclination of 15°. Complete with installation material for enclosure and seals | For rear connection of narrow and lightweight controller panels to the CS-2000 SL light-duty suspension system; the maximum load of this component is 250 N at a maximum system length of 1500 mm | For rear connection of narrow and lightweight controller panels to the CS-2000 SL light-duty suspension system; the maximum load of this component is 250 N at a maximum system length of 1500 mm |
| 1200 | 3000 | 3400 |
| Aluminium | Aluminium | Aluminium |
| Swivel angle limiter 9805129000 | | |
| | | |



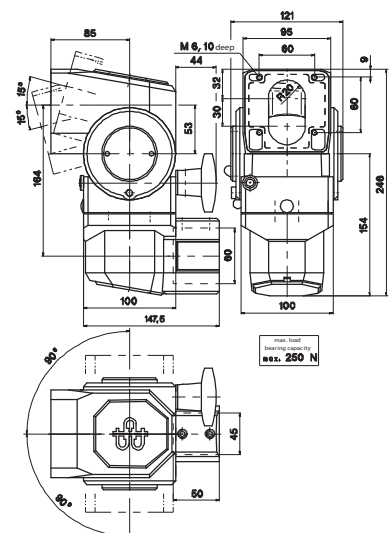
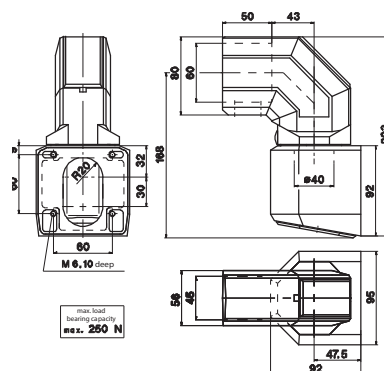
Light-Duty Suspension System CS-2000 SL 45 / 60

| Article | | Panel elbow coupling | Panel tilt / turn elbow coupling W |
|----------------|----------|-----------------------------------------------------------------------|-----------------------------------------------------------------------|
| Article number | (colour) | 1015233000 RAL 7035 light grey 1015379000 RAL 9006 white aluminium | 1015236000 RAL 7035 light grey 1015380000 RAL 9006 white aluminium |



| | | |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Details | For rear connection of narrow and lightweight controller panels to the CS-2000 SL light-duty suspension system; the maximum load of this component is 250 N at a maximum system length of 1500 mm | For rear connection of narrow and lightweight controller panels to the CS-2000 SL light-duty suspension system; the maximum load of this component is 250 N at a maximum system length of 1500 mm |
| Weight in g | 3000 | 3460 |
| Material | Aluminium | Aluminium |
| Accessories (retrofitable) see pages 154 / 155 | | |
| Application example | | |

Dimensions in mm

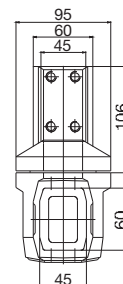
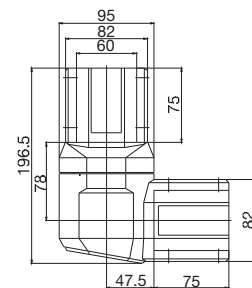
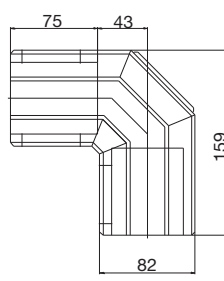
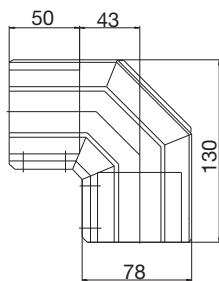
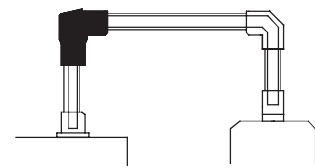
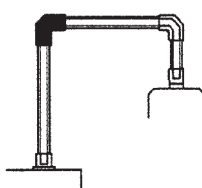
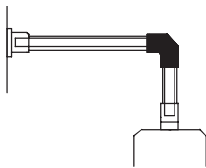


CAD files available
at www.bernstein.eu

| Elbow CS-2000 SL | Elbow for torque load CS-2000 SL | Plug-on joint CS-2000 SL |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 1015171000 RAL 7035 light grey 1015381000 RAL 9006 white aluminium | 1015172000 RAL 7035 light grey 1015382000 RAL 9006 white aluminium | 1015173000 RAL 7035 light grey 1015383000 RAL 9006 white aluminium |



| | | |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| Installation opening with snap-on plastic cover. Complete with seals | Increased wall strength. Adjustment facility. Installation opening with snap-on plastic cover. Complete with seals | Swivel angle 300° with stop. Installation opening with snap-on plastic cover. Complete with seals |
| 590 | 1000 | 1850 |
| Aluminium | Aluminium | Aluminium |
| | | Swivel angle limiter 9805132000 |





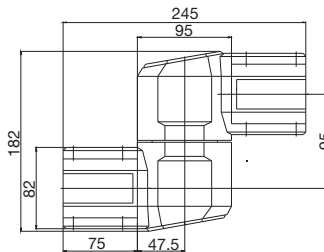
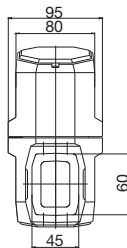
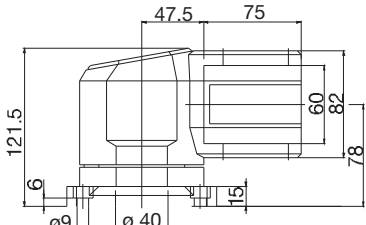
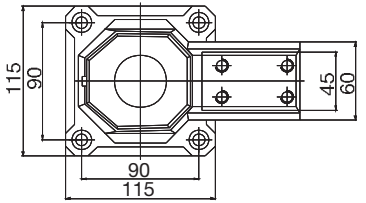
Light-Duty Suspension System CS-2000 SL 45 / 60

| Article | Intermediate joint CS-2000 SL | Top joint CS-2000 SL |
|-------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------|
| Article number (colour) | 1015174000 RAL 7035 light grey 1015384000 RAL 9006 white aluminium | 1015175000 RAL 7035 light grey 1015385000 RAL 9006 white aluminium |



| | | |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Details | Swivel angle 360° with limit stop. Installation openings both ends. Adjustment facility. Complete with seals | Swivel angle 300° with stop. Adjustment facility. Installation opening with snap-on plastic cover. Complete with seals |
| Weight in g | 2130 | 1720 |
| Material | Aluminium | Aluminium |
| Accessories (retrofitable) see pages 154 / 155 | Swivel angle limiter 9805132000 | Swivel angle limiter 9805132000 |

| | | |
|---------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Application example |  |  |
|---------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|

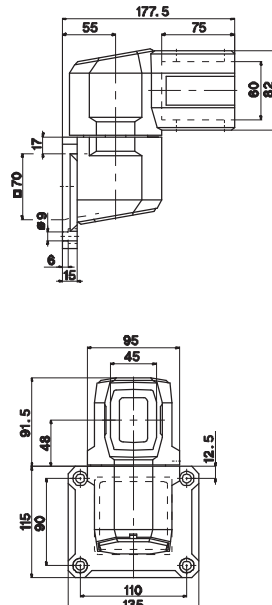
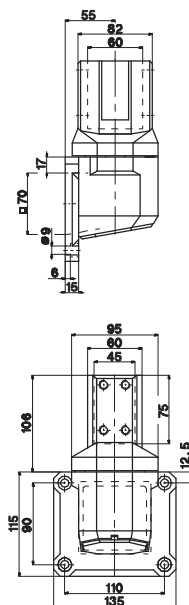
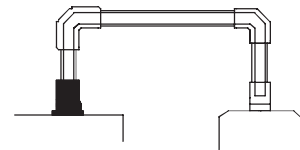
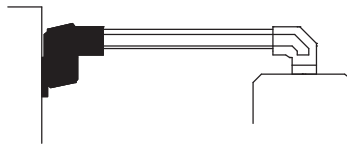
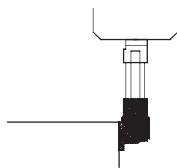
| | | |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions in mm |   |   |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

CAD files available
at www.bernstein.eu

| Wall joint, vertical outlet CS-2000 SL | | Wall joint, horizontal outlet CS-2000 SL | | Base, rotary CS-2000 SL | |
|----------------------------------------|--------------------------|------------------------------------------|--------------------------|-------------------------|--------------------------|
| 1015177000 | RAL 7035 light grey | 1015176000 | RAL 7035 light grey | 1015178000 | RAL 7035 light grey |
| 1015386000 | RAL 9006 white aluminium | 1015387000 | RAL 9006 white aluminium | 1015388000 | RAL 9006 white aluminium |



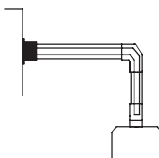
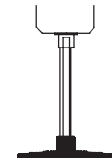
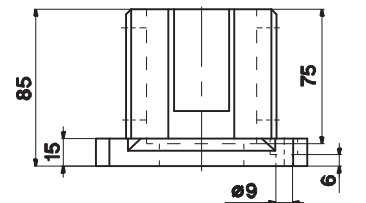
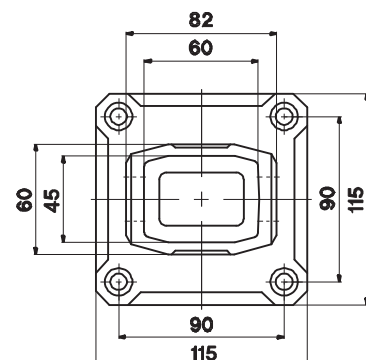
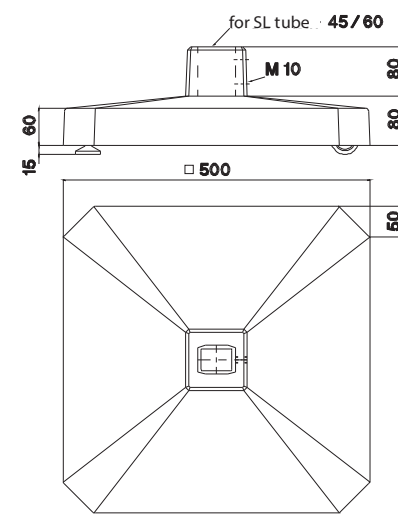
| | | | | | |
|------------------------------------------------------------------------------------------------------------------------|------------|------------------------------------------------------------------------------------------------------------------------|------------|---------------------------------------------------------------------------|------------|
| Swivel angle 300° with stop. Adjustment facility. Installation opening with snap-on plastic cover. Complete with seals | | Swivel angle 300° with stop. Adjustment facility. Installation opening with snap-on plastic cover. Complete with seals | | Angle of rotation 300° with stop Adjustment facility. Complete with seals | |
| 1840 | | 2090 | | 1460 | |
| Aluminium | | Aluminium | | Aluminium | |
| Swivel angle limiter | 9805132000 | Swivel angle limiter | 9805132000 | Swivel angle limiter | 9805132000 |



Light-Duty Suspension System CS-2000 SL 45 / 60

| Article | Base, wall flange CS-2000 SL | | Free-standing base CS-2000 SL | |
|----------------|------------------------------|-----------------------------------------------------------------------|-------------------------------|-----------------------------------------------------------------------|
| Article number | (colour) | | | |
| | | 1015179000 RAL 7035 light grey 1015389000 RAL 9006 white aluminium | | 1015180000 RAL 7035 light grey 1015390000 RAL 9006 white aluminium |



| | | |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Details | Adjustment facility. Complete with seals | Base for free-standing applications |
| Weight in g | 690 | 11820 |
| Material | Aluminium | Aluminium |
| Accessories (retrofitable) see pages 154 / 155 | | |
| Application example |  |  |
| Dimensions in mm |   |  |

CAD files available
at www.bernstein.eu