

## Suspension systems

### CS-2000 50/60/80

With its large variety of components and different system sizes (50<sup>□</sup>, 60<sup>□</sup> and 80<sup>□</sup>), the BERNSTEIN range of suspension systems CS-2000 provides a technically mature solution for numerous applications.

#### System structure

The following conditions are important for your choice of system:

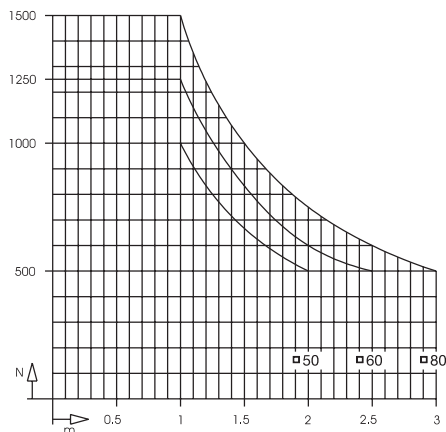
- Load-bearing capacity of the overall system
- Free passage for cables
- Design
- System configuration

Having decided on the right size of the system, you need to select the necessary components and tubes, so that you can put together the desired configuration.

#### System sizes

This concerns the suspension systems of the sizes 50<sup>□</sup>, 60<sup>□</sup> and 80<sup>□</sup>. The figures refer to the dimensions of steel tubes that link up the components.

- System 50<sup>□</sup> – steel tube 50 x 50 mm
- System 60<sup>□</sup> – steel tube 60 x 60 mm
- System 80<sup>□</sup> – steel tube 80 x 80 mm



Selection support for different load capacities are presented on pages 400/401.



#### Materials

- Gravity-die-cast aluminium components: AlSi12 (Cu)
- Steel-cast components: GGG 40
- Steel welded constructions: St 37
- Suspension tubes: St 37
- Bearings: St/PTFE
- Seals: CR
- Installation opening: AlSi12 (Cu)
- Expansion bellows: PVC

#### Colours

- Suspension system components: light grey, RAL 7035
- Expansion bellows: light grey, RAL 7035
- Tubes: light grey, RAL 7035

#### System benefits

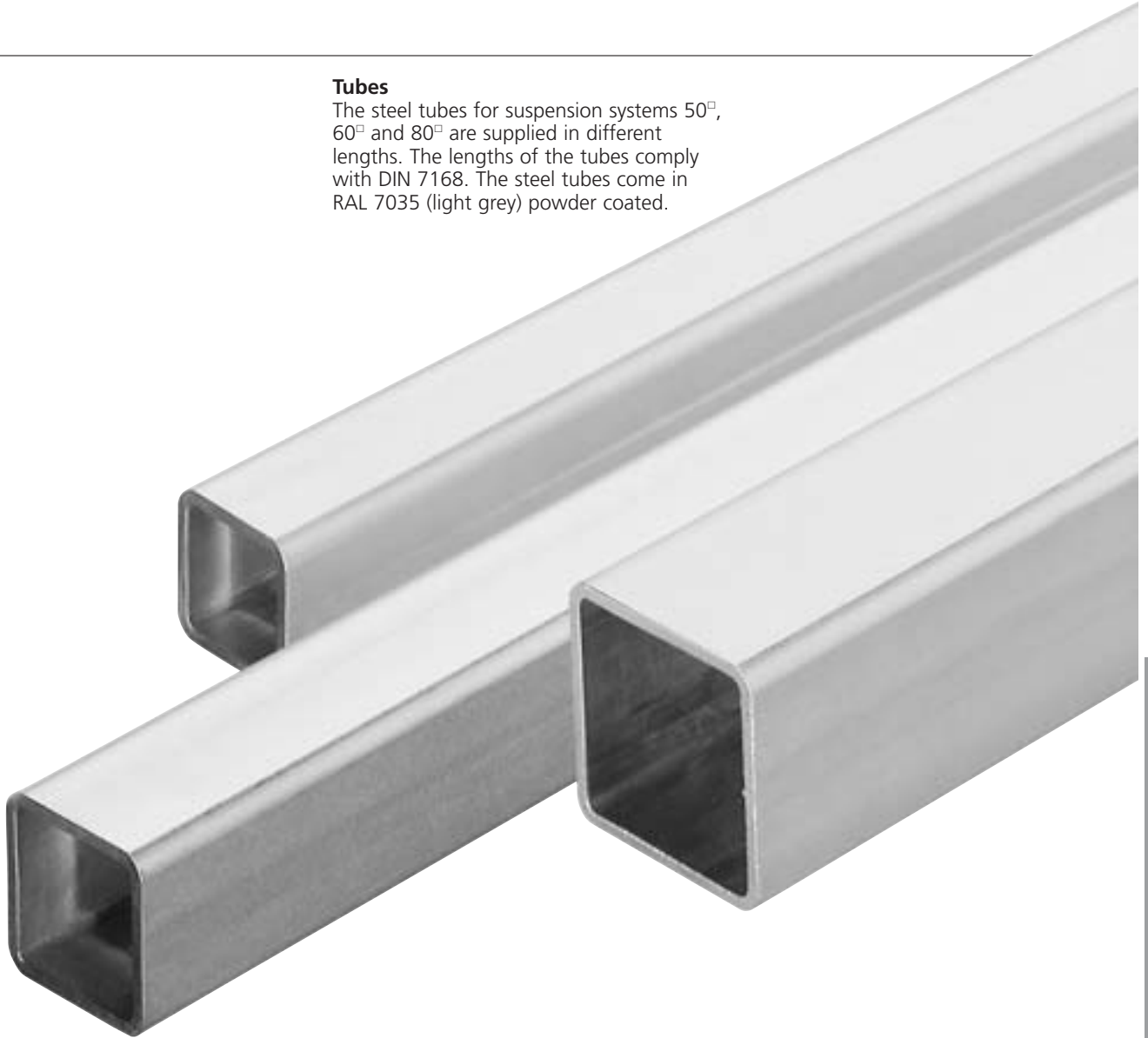
- Cable installation openings at all joints to simplify the installation of cables
- Integrated strain relief to ease the strain on cables
- High variability through the large number of available components
- Broad spectrum of applications through systems with different load-bearing capacities
- Flange coupling with clamping lever at operator face and selectable rotation limiter
- Maintenance-free friction bearings in all joints and couplings
- Adjustment options for the exact adjustment of suspension tubes
- Wall and intermediate joints with clamping lever at operator face and optional rotation limiter (available as accessories).

## Connecting tubes

### CS-2000 50/60/80

#### Tubes

The steel tubes for suspension systems 50<sup>□</sup>, 60<sup>□</sup> and 80<sup>□</sup> are supplied in different lengths. The lengths of the tubes comply with DIN 7168. The steel tubes come in RAL 7035 (light grey) powder coated.



#### Weights

System 50 <sup>□</sup>	6.3 kg/m
System 60 <sup>□</sup>	8.1 kg/m
System 80 <sup>□</sup>	11.0 kg/m

#### Available lengths of tubes

Length (mm)	System 50 <sup>□</sup> Part number	System 60 <sup>□</sup> Part number	System 80 <sup>□</sup> Part number
250	952.5.0520.00	952.6.0390.00	952.7.1140.00
500	952.5.0530.00	952.6.0400.00	952.7.1150.00
750	952.5.0540.00	952.6.0410.00	952.7.1160.00
1000	952.5.0550.00	952.6.0420.00	952.7.1170.00
1250	952.5.0560.00	952.6.0430.00	952.7.1180.00
1500	952.5.0570.00	952.6.0440.00	952.7.1190.00
2000	952.5.0590.00	952.6.0460.00	952.7.1210.00
3000	952.5.0610.00	952.6.0480.00	952.7.1230.00

## System components

### Suspension system for medium loads

#### Type CS-2000 System size 50<sup>□</sup>

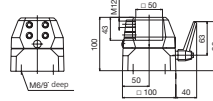


Part	
Weight	(g)
Material	
<b>Part number</b>	RAL 7035 light grey

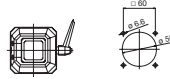
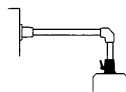
For enclosure mounting  
Standard coupling, flange, CS-2000

1550 **Dimensions** in mm  
Aluminium  
**101.6.7000.00**

Angle of rotation 320°  
with limiter  
Clamping lever at  
operator face  
Complete with seals and  
fixing screws



Detail



**Accessories**, can be retro-fitted  
Rotation limiter (see page 426)  
Light adapter (see page 426)

980.5.1760.00  
-

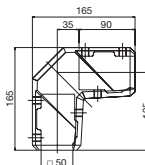


Part	
Weight	(g)
Material	
<b>Part number</b>	RAL 7035 light grey

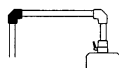
Elbow for moment load CS-2000

4500 **Dimensions** in mm  
GGG  
**101.6.7090.00**

Increased strength  
Access cover  
Complete with seals

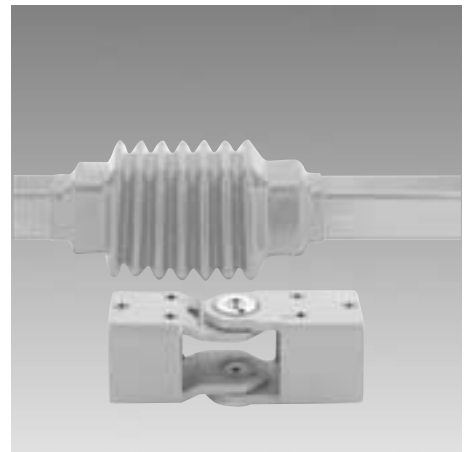


Detail



**Accessories**, can be retro-fitted  
Rotation limiter (see page 427)  
Light adapter (see page 426)

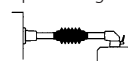
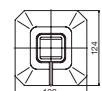
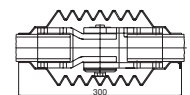
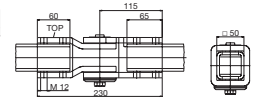
-  
980.5.1870.00



Intermediate joint CS-2000

4360 **Dimensions** in mm  
Steel  
**101.6.4540.00**

Expansion bellows can  
be zipped on at a later  
stage  
Rotation angle 180° with  
limiter on either side  
Integrated rotation tor-  
que setting



980.5.0630.00  
-



## System components

### Suspension system for medium loads

#### Type CS-2000 System size 50<sup>□</sup>

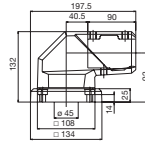


Part	
Weight	(g)
Material	
<b>Part number</b>	RAL 7035 light grey

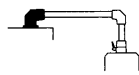
#### Set-up joint CS-2000

9240
GGG
<b>101.6.7120.00</b>
Angle of rotation 306° with limiter
Complete with seals

#### Dimensions in mm



Detail



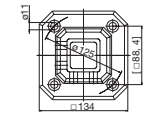
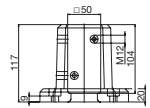
#### Accessories, can be retro-fitted

Rotation limiter (see page 426)	980.5.1770.00
Light adapter (see page 426)	980.5.1870.00

#### Base bracket CS-2000

4320
GGG
<b>101.6.4580.00</b>
Complete with seals

#### Dimensions in mm





## System components

### Suspension system for medium loads

#### Type CS-2000 System size 60<sup>□</sup>

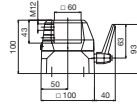


Part	
Weight	(g)
Material	
<b>Part number</b>	RAL 7035 light grey

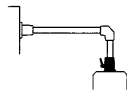
For enclosure mounting  
Standard coupling, flange CS-2000

2380	<b>Dimensions</b> in mm
Aluminium	
<b>101.6.7010.00</b>	

Angle of rotation 320°  
with limiter  
Clamping lever at  
operator face  
Complete with gaskets  
and fixing screws



Detail



**Accessories**, can be retro-fitted

Rotation limiter (see page 426)

Light adapter (see page 426)

980.5.1760.00

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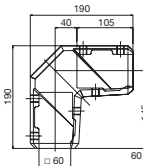


Part	
Weight	(g)
Material	
<b>Part number</b>	RAL 7035 light grey

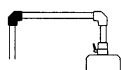
Elbow for momentum load/stress CS-2000

6000	<b>Dimensions</b> in mm
GGG	
<b>101.6.7100.00</b>	

Higher density  
Unscrewable mounting  
opening  
Complete with gaskets



Detail



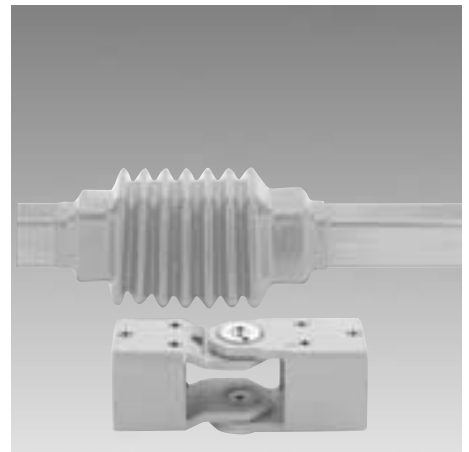
**Accessories**, can be retro-fitted

Rotation limiter (see page 427)

Light adapter (see page 426)

980.5.1880.00

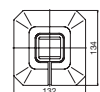
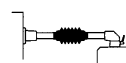
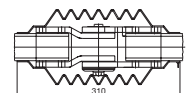
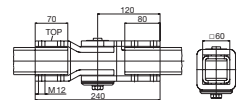
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Intermediate joint CS-2000

5920	<b>Dimensions</b> in mm
Steel	
<b>101.6.4640.00</b>	

Expansion bellows can  
be zipped on at a later  
stage  
Pivotal angle 180° with  
limiter on either side  
Rotation moment setting





For enclosure mounting  
Elbow coupling, flange CS-2000

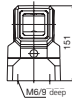
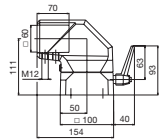
2950

Aluminium

**101.6.7040.00**

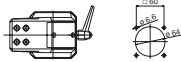
Angle of rotation 320°  
with limiter  
Unscrewable installation  
opening  
Clamping lever at  
operator face  
Complete with seals and  
fixing screws

**Dimensions in mm**



980.5.1760.00

980.5.1880.00



Elbow CS-2000

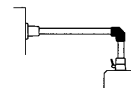
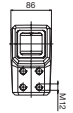
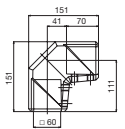
1850

Aluminium

**101.6.7070.00**

Unscrewable installation  
opening  
Complete with seals

**Dimensions in mm**



980.5.1880.00



Wall flange CS-2000

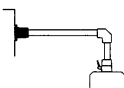
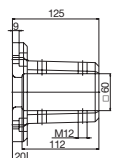
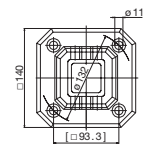
4900

GGG

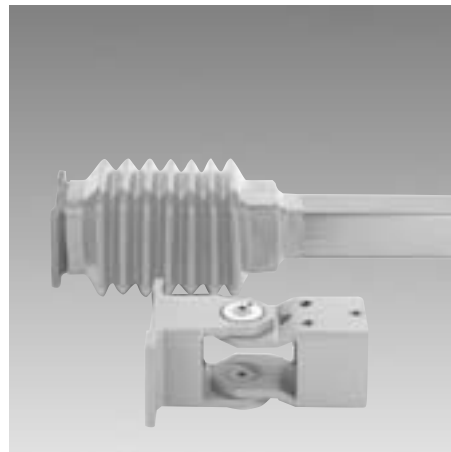
**101.6.4650.00**

Complete with gaskets

**Dimensions in mm**



980.5.0630.00



Wall joints CS-2000

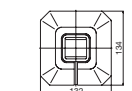
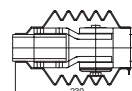
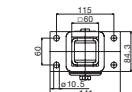
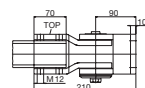
5360

Steel

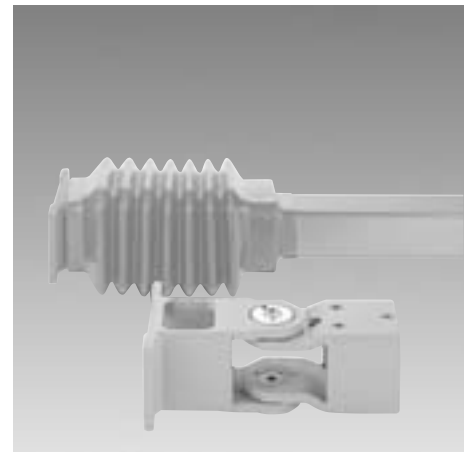
**101.6.4660.00**

Expansion bellows can  
be zipped on at a later  
stage  
Pivotal angle 180° with  
limiter on either side  
Rotation moment setting

**Dimensions in mm**



980.5.0630.00



Wall joint for cable inlet CS-2000

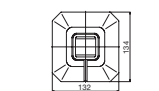
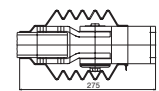
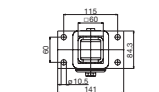
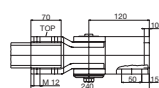
5620

Steel

**101.6.4670.00**

Expansion bellows can  
be zipped on at a later  
stage  
Pivotal angle 180° with  
limiter on either side  
Rotation moment setting

**Dimensions in mm**



980.5.0630.00

## System components

### Suspension system for medium loads

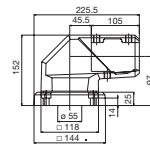
#### Type CS-2000 System size 60<sup>□</sup>



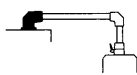
Part	
Weight	(g)
Material	
<b>Part number</b>	RAL 7035 light grey

Slip-on joint CS-2000  
12740  
GGG  
**101.6.7130.00**  
Angle of rotation 306°  
with limiter  
Complete with seals

#### Dimensions in mm



Detail



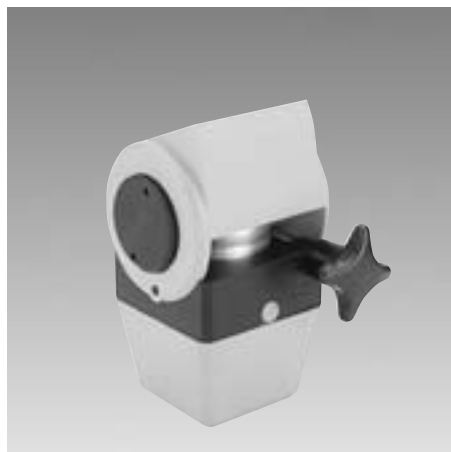
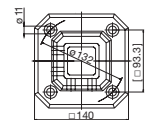
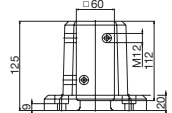
**Accessories**, can be retro-fitted  
Rotation limiter (see page 426)  
Light adapter (see page 426)

980.5.1770.00  
980.5.1880.00

Base bracket CS-2000  
4800  
GGG  
**101.6.4680.00**

#### Dimensions in mm

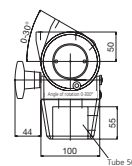
Complete with seals



Part	
Weight	(g)
Material	
<b>Part number</b>	RAL 7035 light grey

Swivel tilt coupling CS-2000  
2900  
Aluminium und PA  
**101.6.3200.00**  
Angle of rotation 300°  
with limiter  
Inclination angle infinitely  
adjustable 0–30°  
Complete with gaskets,  
fixing screws

#### Dimensions in mm

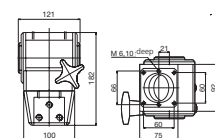


Detail

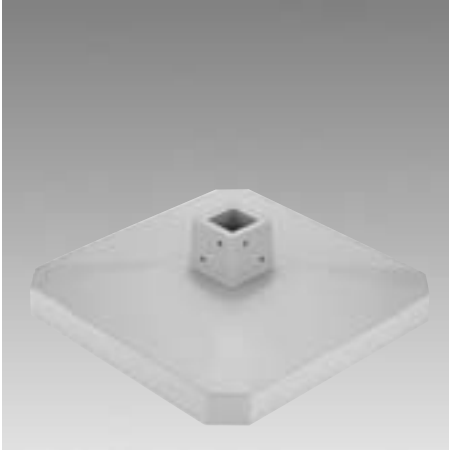


**Accessories**, can be retro-fitted  
Rotation limiter (see page 426)

980.5.1300.00



Housing: max 300 N



Self-supporting base bracket CS-2000

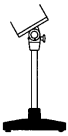
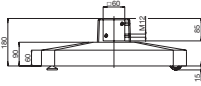
14000

Aluminium

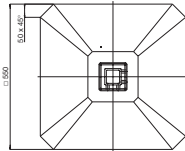
**101.6.3220.00**

Large-surface foot for self-supporting applications

**Dimensions** in mm



Fixed rollers, guide rolls,  
Feet see page 427



Indication adapter CS-2000

15° = 460

30° = 600

60° = 800

Aluminium

**15° = 101.6.4590.00**

**30° = 101.6.4600.00**

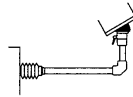
**60° = 101.6.4610.00**

The indication adapter is fixed firmly onto the flange or flange angle coupling  
Complete with seals and fixing screws

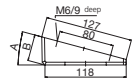
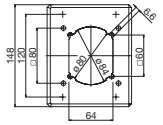
**101.6.4590.00:** A = 15°, B = 39

**101.6.4600.00:** A = 30°, B = 66

**101.6.4610.00:** A = 60°, B = 111



**Dimensions** in mm



## System components

### Suspension system for medium loads

#### Type CS-2000 System size 80<sup>□</sup>



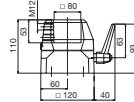
Part	
Weight	(g)
Material	
<b>Part number</b>	RAL 7035 light grey

For enclosure mounting  
Standard coupling, flange CS-2000

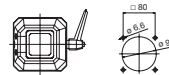
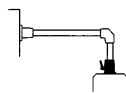
3270  
Aluminium  
**101.6.7020.00**

**Dimensions** in mm

Angle of rotation 320°  
with limiter  
Clamping lever at  
operator face  
Complete with seals and  
fixing screws



Detail



**Accessories**, can be retro-fitted

Rotation limiter (see page 426)

Light adapter (see page 426)

980.5.1760.00

—



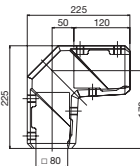
Part	
Weight	(g)
Material	
<b>Part number</b>	RAL 7035 light grey

Elbow formomentum stress CS-2000

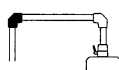
8500  
GGG  
**101.6.7110.00**

**Dimensions** in mm

High density  
Unscrewable mounting  
opening  
Complete with gaskets



Detail



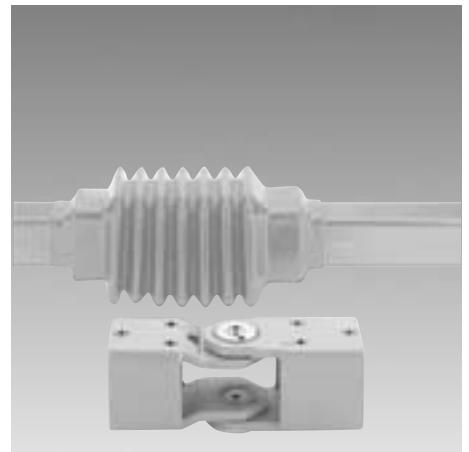
**Accessories**, can be retro-fitted

Rotation limiter (see page 426/427)

Light adapter (see page 426)

980.5.1890.00

—

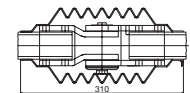
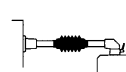
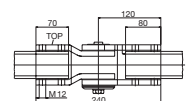


Intermediate joint CS-2000

9700  
Steel  
**101.6.4710.00**

**Dimensions** in mm

Expansion bellows can  
be zipped on at a later  
stage  
Pivotal angle 180° with  
limiter on either side  
Rotation moment setting



980.5.0620.00

—



For enclosure mounting  
Elbow coupling, flange CS-2000

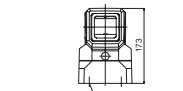
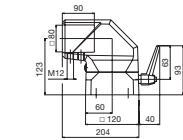
4100

Dimensions in mm

Aluminium

**101.6.7050.00**

Angle of rotation 320°  
with limiter  
Clamping lever at  
operator face  
Complete with seals and  
fixing screws



980.5.1760.00

980.5.1890.00



Elbow CS-2000

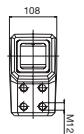
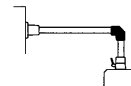
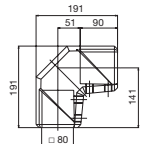
2900

Dimensions in mm (inch)

Aluminium

**101.6.7080.00**

Installation opening  
Complete with gaskets



980.5.1890.00



Wall flange CS-2000

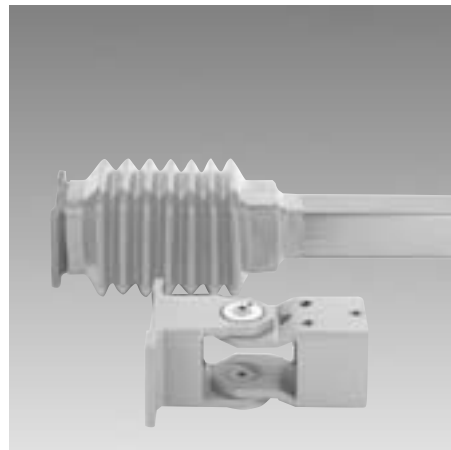
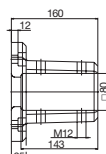
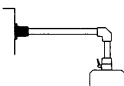
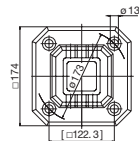
9100

Dimensions in mm

GGG

**101.6.4720.00**

Complete with gaskets



Wall joint CS-2000

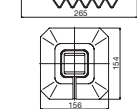
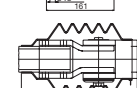
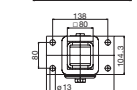
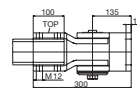
9250

Dimensions in mm

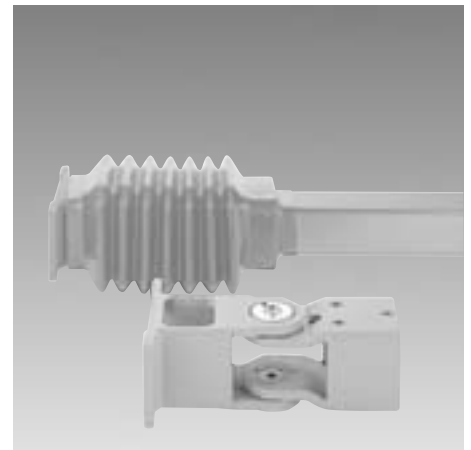
Steel

**101.6.4730.00**

Expansion bellows can  
be zipped on at a later  
stage  
Pivotal angle 180° with  
limiter on either side  
Rotation moment setting



980.5.0620.00



Wall joint for cable inlet CS-2000

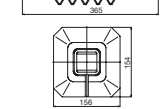
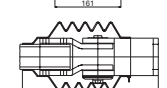
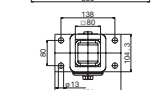
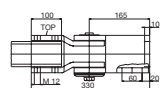
9500

Dimensions in mm

Steel

**101.6.4740.00**

Expansion bellows can  
be zipped on at a later  
stage  
Pivotal angle 180° with  
limiter on either side  
Rotation moment setting



980.5.0620.00

## System components

### Suspension system for medium loads

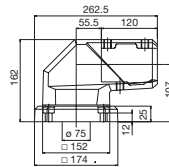
#### Type CS-2000 System size 80<sup>□</sup>



Part	
Weight	(g)
Material	
<b>Part number</b>	RAL 7035 light grey

Slip-on joint CS-2000  
20620  
GGG  
**101.6.7140.00**  
Pivotal angle 306° with limiter on either side

#### Dimensions in mm

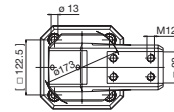


Detail



**Accessories**, can be retro-fitted  
Rotation limiter (see page 426)  
Light adapter (see page 426)

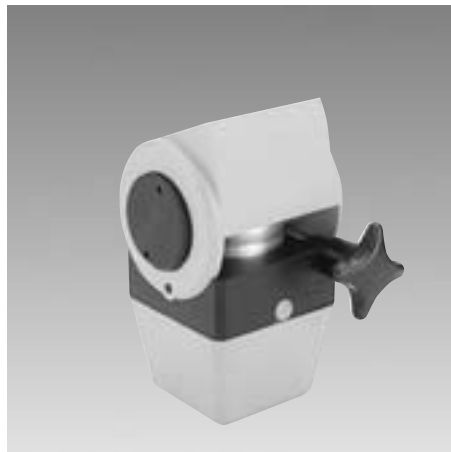
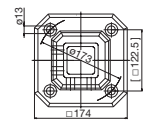
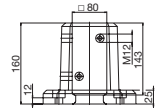
980.5.1770.00  
980.5.1880.00



Part	
Weight	(g)
Material	
<b>Part number</b>	RAL 7035 light grey

Base bracket CS-2000  
9240  
GGG  
**101.6.4750.00**  
Complete with seals

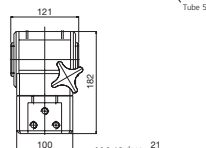
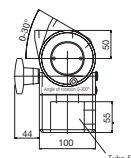
#### Dimensions in mm



Part	
Weight	(g)
Material	
<b>Part number</b>	RAL 7035 light grey

Swivel tilt coupling CS-2000  
2900  
Aluminium and PA  
**101.6.3210.00**  
Pivotal angle 300° with buffer  
Inclination continuously adjustable 0–30°  
Complete with gaskets, mounting screws

#### Dimensions in mm

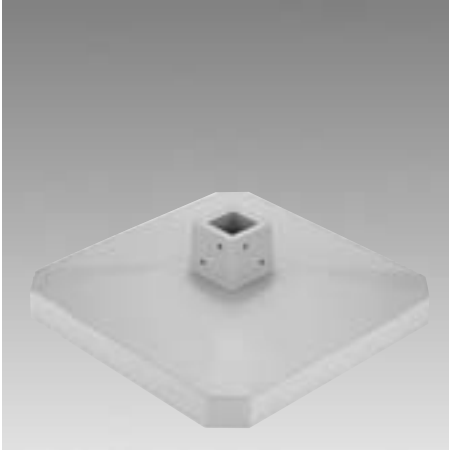


Detail

**Accessories**, can be retro-fitted  
Rotation limiter (see page 426)

980.5.1300.00





Self-supporting base bracket CS-2000

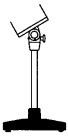
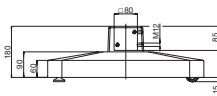
14300

Aluminium

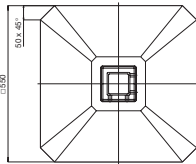
**101.6.3230.00**

Large-surface foot for self-supporting applications

**Dimensions** in mm



Fixed rollers, guide rolls,  
Feet see oage 427



Inclination adapter CS-2000

15° = 460

30° = 600

60° = 800

Aluminium

**15° = 101.6.4590.00**

**30° = 101.6.4600.00**

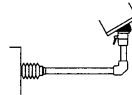
**60° = 101.6.4610.00**

The inclination adapter is fixed firmly onto the flange or flange angle-coupling  
Complete withseals and fixing screws

**101.6.4590.00:** A = 15°, B = 39

**101.6.4600.00:** A = 30°, B = 66

**101.6.4610.00:** A = 60°, B = 111



**Dimensions** in mm

