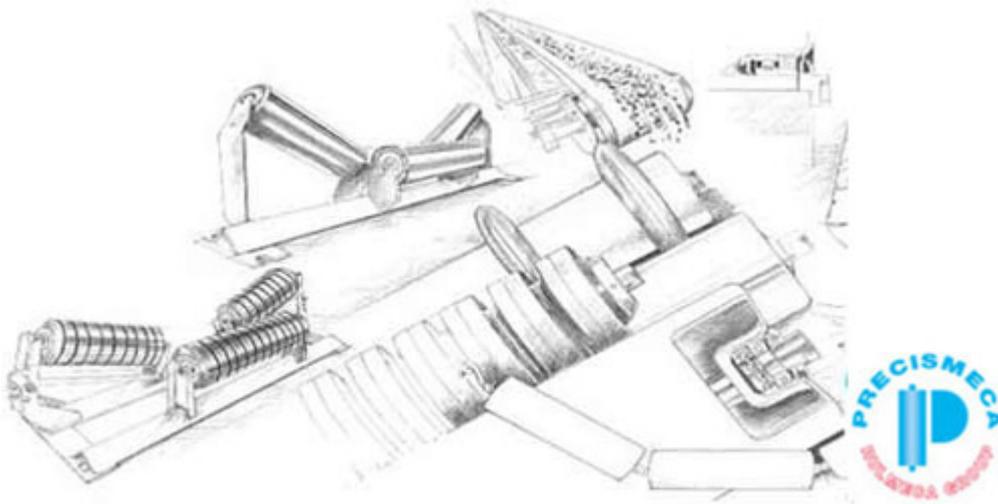


## PRECISMECA - RULMECA GROUP Heavy Duty Rollers

are designed for heavy duty open mining applications. Thanks to the high quality machined parts & a non contacting multi-chamber labyrinth seal, the rollers run with a whisper. The high quality machining process is a guarantee for a long service life of the PRECISMECA rollers - 8 years in operation 24 hours a day is not a rarity.



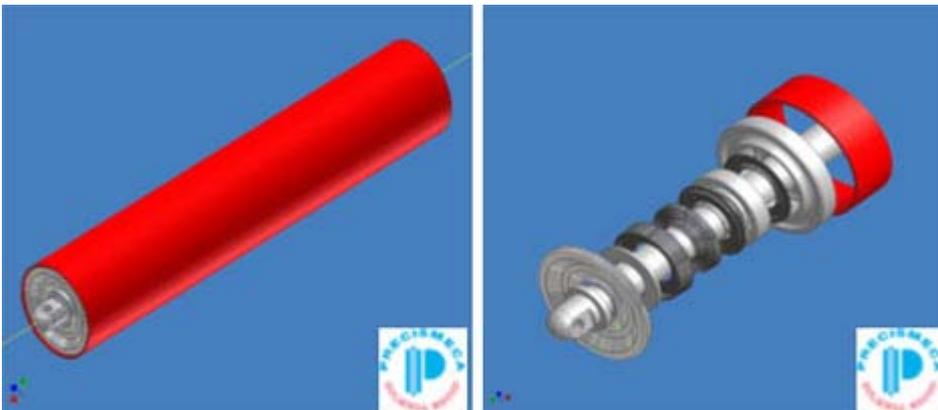
### Basic Information



The heavy duty PRECISMECA - RULMECA GROUP - rollers assembled with bearing sizes 6308 - 6312 can be used on high powered belt conveyors with a large amount of line loads.

The mounting dimensions (roller length and axle end) are mainly constructed acc. to DIN 15207 with the geometry's. ( A2, B2, G1 and G2 ).

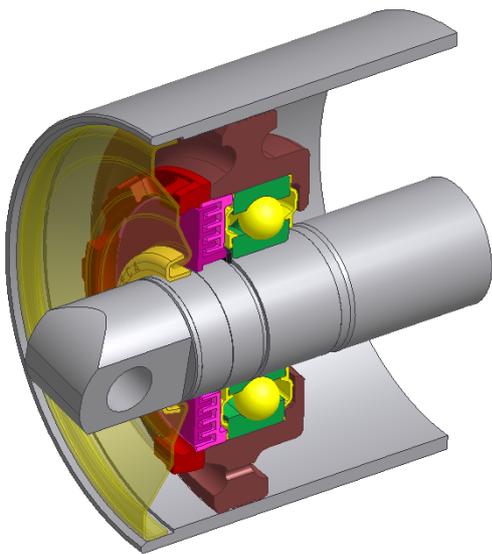
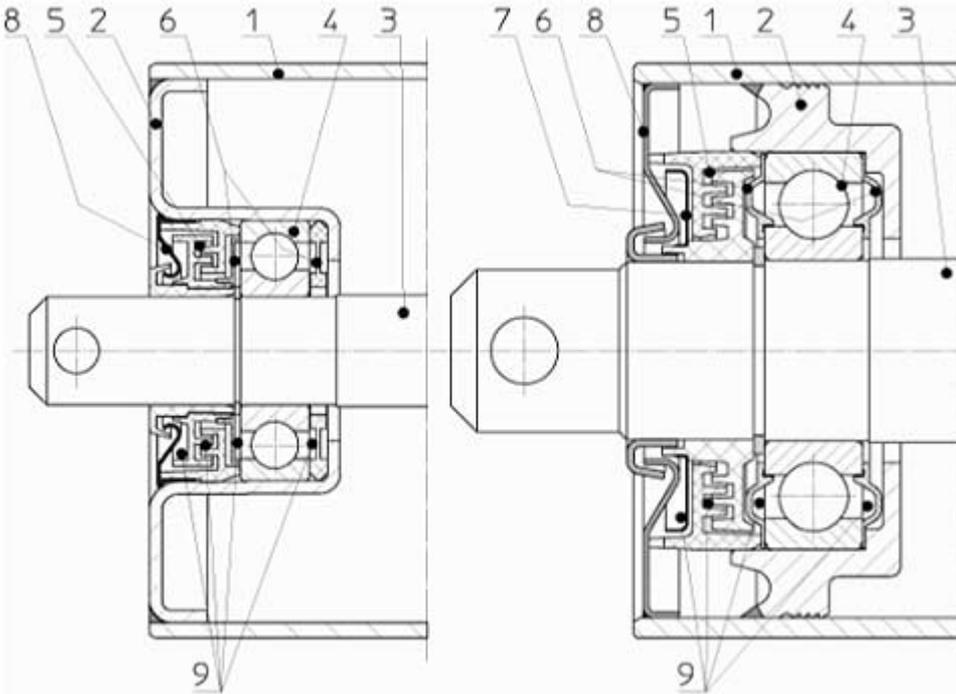
Other axle end geometry's acc. to DIN 15207 as well as roller length, types of rubber lagging or special options are available on request. Different types of fastening elements, bigger bearing sizes, assembly variants or suspension variants are also available on request.



**Constructional Design of the Standard Types:**



**Bearing size 6308 6310/6312**



### 1. Roller Shell

We utilise roller shells with tight tolerances in order to guarantee very limited unbalances and smooth quiet operations. When special tolerances are required the roller shell can be turned and balanced.

### 2. Roller End Housings

Deep-drawn or forged and housings are welded into the shell.

### 3. Roller Axle/Shaft

The roller axle is made of round bars -C 45. The bearing fit areas are ground. Other types of material are available on request.

### 4. Deep Groove Ball Bearings

The roller shell is supported on the axle by high precision roller bearings acc. to DIN 625, Design XXXX - .C3 long life filled with grease. The bearings are assembled with fits of a tolerance of M7 / js6.

### 5. Labyrinth Seals

The bearing space at the front side is sealed with a multi chamber labyrinth sealing system with closely spaced air-gaps.

### 6. Bearing Plastic Seals

The plastic seals protect the bearings from inside and outside.

### 7. Protective cover

An additional protective cover is fitted in front of the labyrinth seal to prevent water or dust from reaching the labyrinth.

### 8. Dust and Splash Protective Cover

The outer seals of the roller consist of a dust cover made from a deep drawn steel sheet which is pressed into the shell and an inner splash protective cover made of pressure cast zinc which is pressed onto the axle, these two covers jointly operate as a single chamber labyrinth.

### 9. Grease Chamber

A grease chamber is located at each side of the bearing to keep dirt and water away from it. The bearings are filled with grease for life.

### Preservation

The roller shell and the exterior axle are lubricated with special long-life wax to withstand rust. The dust covers are painted.

### Roller Selection



The loading capacity of a roller is determined by the bearing size, the axle diameter and the thickness of the shell.

### PRECISMECA - RULMECA GROUP Standard Dimension:

#### Shell Diameter Bearing Size

Ø 108 mm 6308

Ø 133 mm 6308; 6310

Ø 159 mm 6308; 6310; 6312

Ø 193 mm 6308; 6310; 6312

Ø 219 mm 6310; 6312

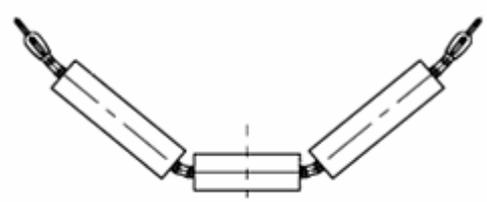
The rollers and the roller frames are calculated acc. to VDI 2341 with regard to the bearing life.

**Garlands Examples:**

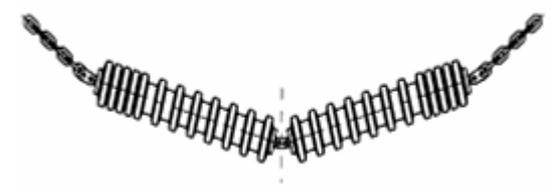


With the available rollers and accessories it is possible to group different type of garlands according to the customer needs.

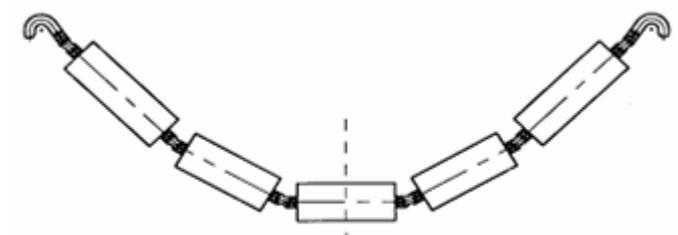
**Carrying garland**



**Return roller garland**



**Impact roller garland**



**Links & Bolts**



**Accessories**

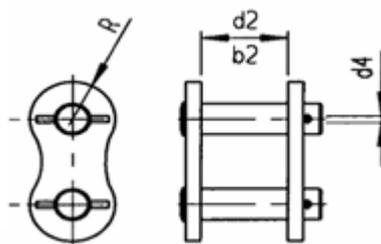
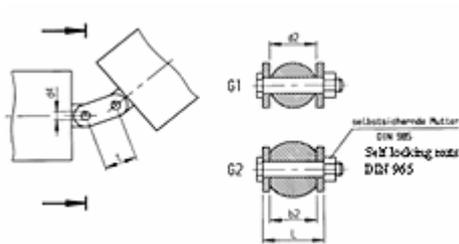
A wide range of accessories are available for assembling garlands. Due to different conveyor systems it is necessary to give the required dimension and or type of accessories when ordering.

**Links & Bolts**

Important for the selection of links is the pitch dimension "t". This dimension depends on the shaft end as well as the trough angle of the garland.

**Chain Link**

The chain link has two fixed bolts. The second link will be fixed with the aid of pins. The clearance between the links is 0.5 to 1.0mm.



**Hooks**

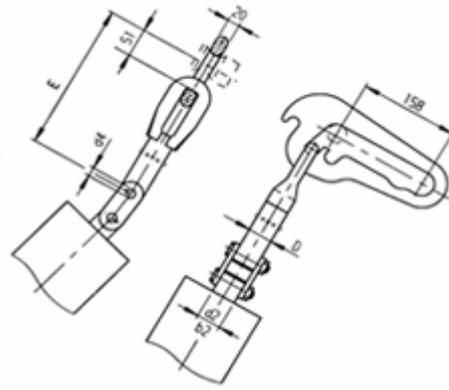
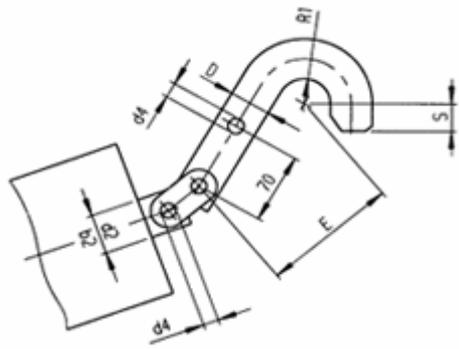


**Hooks**

The selection of hooks depends on the shaft end design/dimension (d2; b2; and d4) used. The important dimension of the hook is dimension "E". The web angle of the hook is 30 to 40 degrees.

**Quick-action lowering eyelet**

The selection of the quick-action lowering eyelet depends on the shaft end design/dimension (d2; b2; and d4) used. The important dimension is the fitting dimension "E".

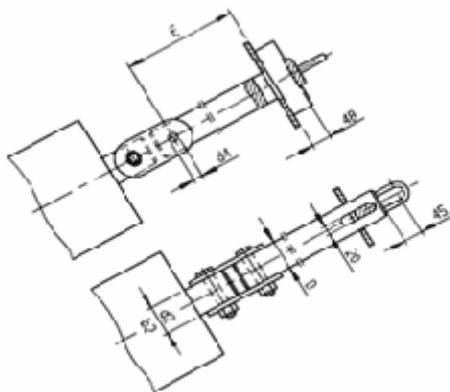


## Suspensions



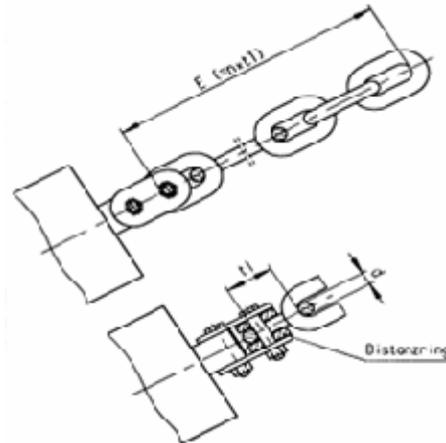
### Suspension Bolt

The dimension of the suspension bolt depends on the design/dimension ( $d_2$ ;  $b_2$  and  $d_4$ ). The fitting dimension "E" can be selected freely.

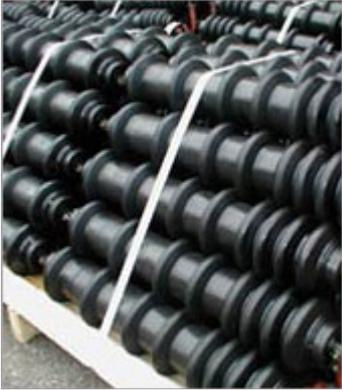


### Round bar chain

The round bar steel chain according to DIN764 part1 has to be assembled with two additional distance washers. The clearance between the links should be 1mm. The fitting dimension "E" will be reached through the necessary number of chain links and the used chain pitch.

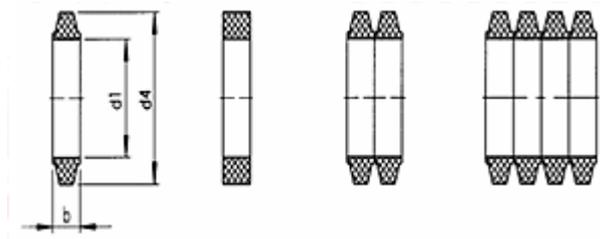


## Supporting Rings for Return Rollers



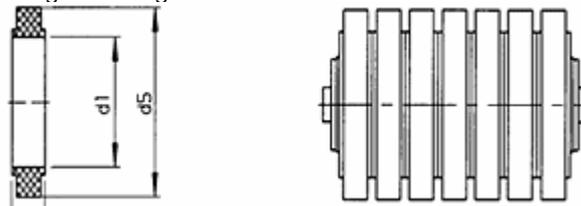
Different types of rubber rings or rubber lagged rollers can be delivered. The inner dimension "d1" is based on the outer diameter of the shell. Please state your required dimension and number of rings when ordering.

Support Ring Option



Support Ring for impact rollers

Design A Design B



**Order form**



A = Flat steel roller

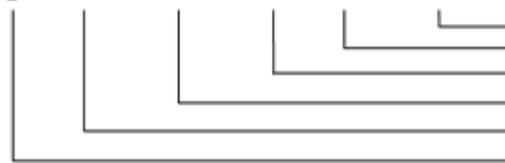
B = Roller with support rings

C = Impact roller with support ring

**Example:**

A  
B  
C

159 x 6.3 x 1000 - G2 - 6312

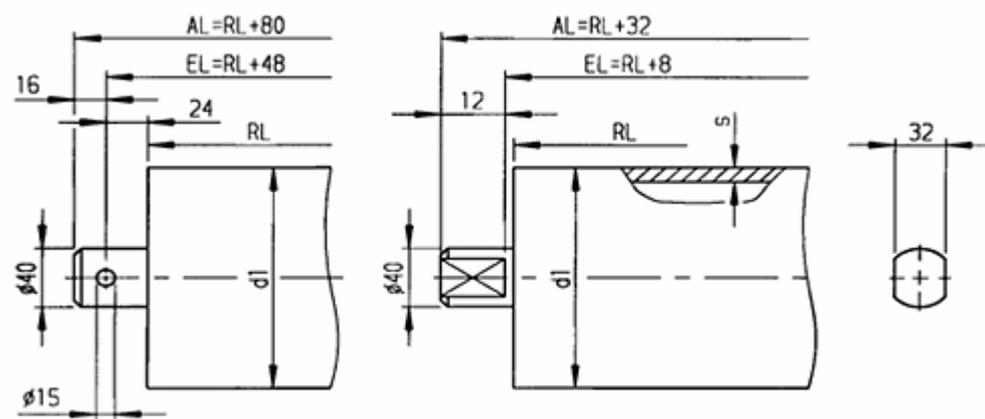


Bearing size  
Shaft end type  
Shell width (RL)  
S  
d1  
Roller type

**Bearing 6308**



**Roller with shaft end G1 Roller with shaft end A2**



Standard shell thickness S (mm)

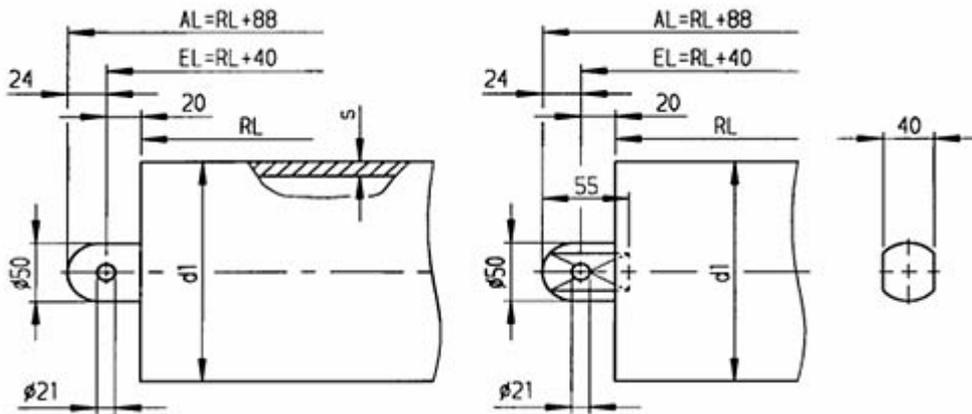
other shell thickness are on request

<b>d1</b>	<b>s</b>	<b>d1</b>	<b>s</b>
108	3.2	108	4.0
133	3.6	133	4.0 5.0
159	4.2	159	5.0 5.6 (6.3)
193.7	5.0	193.7	6.3 (7.1)

**Bearing 6310**



**Roller with shaft end G1 Roller with shaft end A2**



Standard shell thickness S (mm)

d1	s
108	3.6
159	5.6
193.7	6.3
219.1	6.3

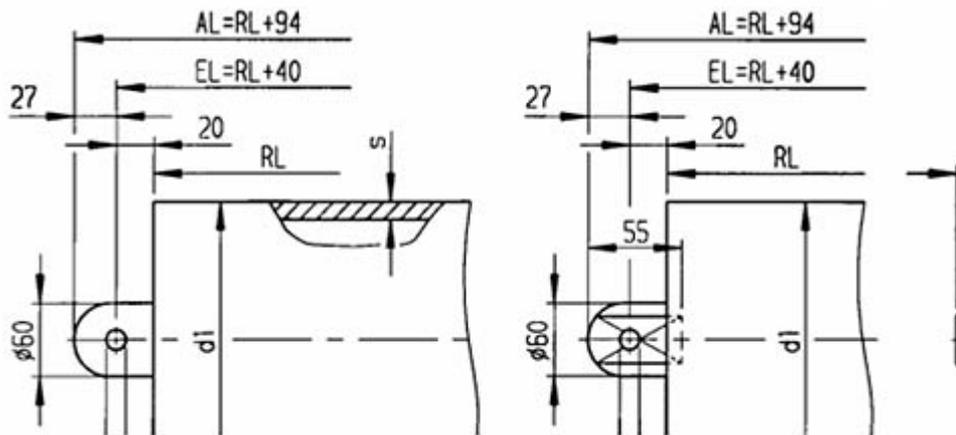
other shell thickness are on request

d1	s		
133	4.0	5.0	7.1
159	5.0	6.3	7.1
193.7		5.0	7.1
219		7.1	8.0

**Bearing 6312**



Roller with shaft end G1 Roller with shaft end A2



Standard shell thickness S (mm)

d1	s
159	7.1
193.7	6.3
219.7	6.3

other shell thickness are on request

d1	s	
159	6.3	
193.7	7.1	
219	7.1	8.0