



### **2.5.2 Series TOP**

#### **New thermoplastic polymer roller**

New, very flexible roller series, suitable in applications where a low weight is requested, corrosive material or environment is present, high humidity, smooth and low noise operation is necessary, or where low resistances and low energy consumption are researched.

TOP rollers are suitable for use in a wide variety of applications and products such as cement, coal, gravel, fertilisers, ports, chemicals and many others.

**Working temperature: -25 /+50 °C**





## 2 Rollers

### series TOP

#### Characteristics

##### Shell

- Outer shell: High Density Polyethylene (HDPE) tube, black colour, anti-corrosion to the main chemical aggressive elements. Extra deep press fit between the tube and the bearing housing.
- Reinforcing steel tube fitted inside the HDPE shell, for rollers lengths  $B > 600$ .

##### Bearing housings

Homopolymer Acetal Resin (POM), colour: yellow RAL 1018

High resistance techno-polymer moulded material, very robust, light, flexible, shock resistant and anti-corrosion to the main chemical aggressive elements.

##### Spindle

Diameters 20 & 25 in drawn steel, ground or fine calibrated to guarantee the best fit within bearings.

##### Bearings

Radial precision ball bearings series 6204 & 6205 increased internal clearance C3.

##### Sealing

Available in both hermetic (TOP/V) and contactless (TOP/C) executions, guaranteeing excellent performance in the presence of any kind of contaminant

**- TOP C1 & C2: Contactless execution**  
recommended where a very low resistance is preferable or requested, with outdoor normal environmental conditions.

Stoneguard & Covercap in POM, Labyrinth & Inner seal in PA6.

**- TOP V1 & V2: Hermetic execution**  
(hermetic seals same as PSV series rollers) recommended in presence of rain, water, salt water, high humidity, powder, sand, dust or dirty applications in general.

Stoneguard in POM, V-ring rubber sliding lip seal, Covercap in steel, Labyrinth & Inner seal in PA6.

##### Max lengths

Std. TOP roller max  $C=608$  mm;  
TOP rollers reinforced exec. max  $C=1608$ .

##### Lubrication

Life lubricated rollers assembled at the factory, with water repellent, anti rust, long life, high pressure, lithium grease NLGI grade 2 (or 3 on request). Special low temperature grease available on request for working temperatures below  $-20^{\circ}\text{C}$ .

##### Load capacity

See following tables of the different diameters and shafts.

##### Caution:

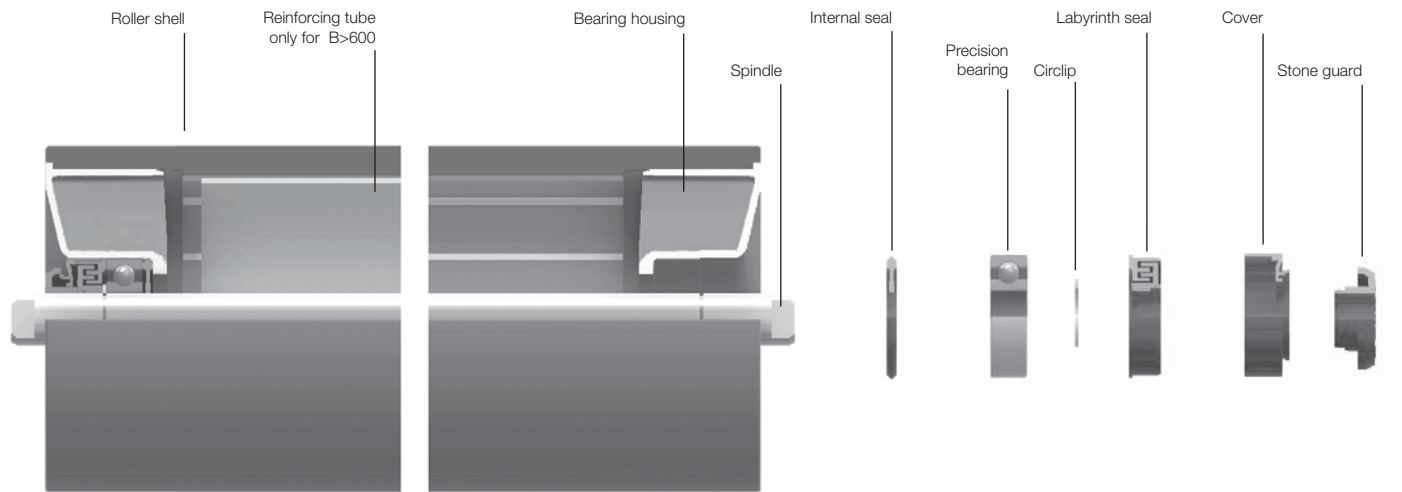
Before assembly carry TOP rollers (up to  $B=600$ ) into the conveyor, please store the rollers indoor or away from direct sun or heat sources, in order to avoid permanent deformation of the HDPE shell.

**Features and benefits.**

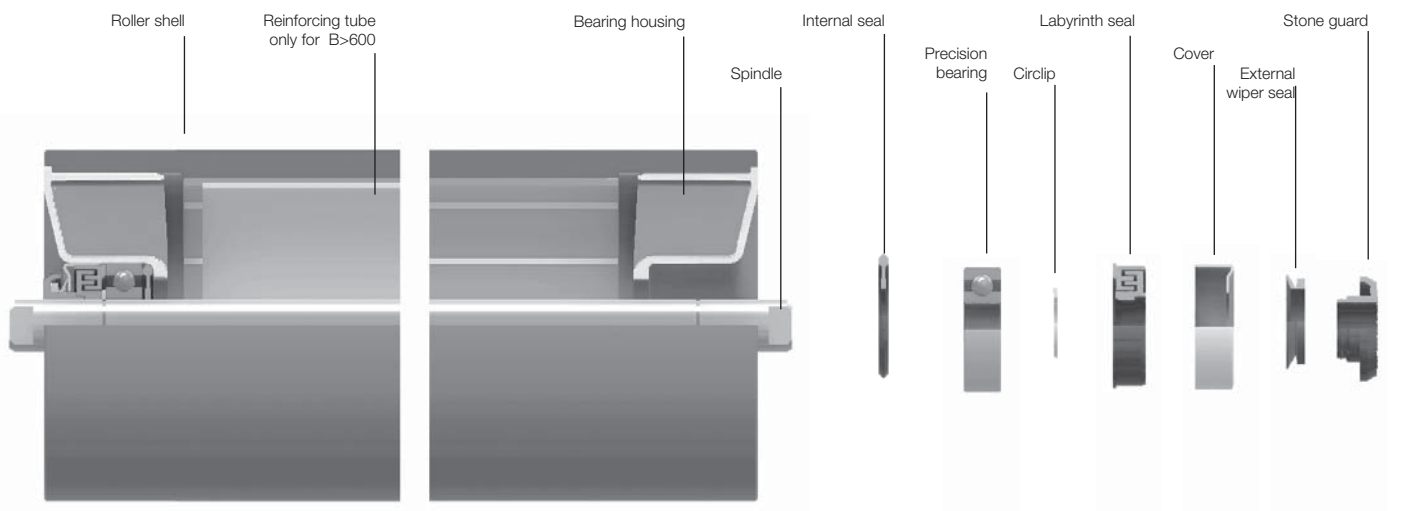
- lower weight with respect to a steel roller (about 50% for carry rollers). That means:
  - lower power consumption during start/stop operation of the belt conveyor and therefore reduction of power requirements on the plant;
  - easier mounting/maintenance operations, preventing back injuries of the operator and guaranteeing a safer intervention, especially in applications where roller mounting or replacement might be critical (suspended belt conveyor, difficult access, long conveyors etc.)
  - easier/cheaper transportation

- low level of abrasion and corrosion of the roller (wear resistant). That means:
  - longer life of the roller;
  - lower maintenance of the whole plant.
- belt friendly, since HDPE tube will not wear the belt
- high resistance to chemical agents. That means:
  - the roller will not rust
  - the roller is suitable for a wide variety of applications even very wet and aggressive
- low noise emission (due to polymers noise absorption)

- self-cleaning roller surface. That means:
  - prevention of build up of material, main cause of belt miss-tracking
  - less spillage from the belt
- low running resistance sealing system (contact-less execution). That means:
  - lower motor torque needed in conveyor starts
  - lower motor power size
  - reduction of energy consumption of the belt conveyor (added effect to that of the lower weight)
  - lower belt wear



TOP/C Contactless



TOP/V Hermetic



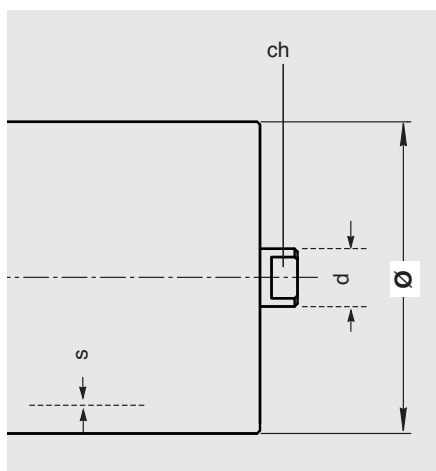
## 2 Rollers

The table indicates the diameters of rollers in production.

Roller dimensions Ø89, 108, 133 acc. to DIN 15207 & ISO 1537

Roller diameters 102 (4"), 127 (5") acc. to CEMA C4 & C5.

Upon request rollers may be supplied with lengths and shaft extensions according to BS, JIS, AFNOR, FEM and other norms, or different shaft executions.



### Programme of production series TOP/C & TOP/V

roller type	ø mm	shell type	HDPE tube s	Inner steel tube (B>600)	spindle		bearings	notes Std. features
					d	ch		
TOP/C1 Contactless	89	PE NPE	9.0	Ø65x1.5	20	14	6204 C3	Tube HDPE black. POM brg. housings yellow RAL 1018 Spindle & inner steel tube (where present): steel S235JR (Fe360, St 37), open slots.
	108	PE NPE	9.5	Ø80x1.5				
TOP/V1 Hermetic	133	PE NPE	11.0	Ø108x2	25	18	6205 C3	
	102 (4")	PE NPE	9.5	Ø80x1.5				
TOP/C2 Contactless	127 (5")	PE NPE	10.5	Ø102x2	25	18	6205 C3	
	133	PE NPE	11.0	Ø108x2				

#### Options on request:

- Stainless steel shaft in AISI 304 or 316
- Stainless steel covercaps in AISI 304 (only for the TOP/V Hermetic executions)
- Stainless steel bearings in AISI 440
- Alternative shaft executions: See page 82-83