CONVEYOR EQUIPMENT

SUPREME HDPE ROLLERS

Melco's HDPE SUPREME conveyor rollers are designed to provide an extended operating life, particularly in dirty and wet conditions.

Designed to handle the same loading capacity as steel rollers with the same dimensions, the SUPREME provides a non corrosive shell and additional static face, and labyrinth sealing system, to further limit the ingress of dirt, while providing a safety system to limit nip point risk.

Melco SUPREME rollers are particularly suited to operations transporting abrasive sand, iron, gold, platinum ore and coal.

The Melco SUPREME range can be supplied in many lengths and in a range of diameter and shaft combinations. Fire retardant and/or anti-static options are available too. The SUPREME can be fitted with an anti-runback mechanism, so is suitable for installation on the carry side of inclined conveyors.

LONGER LIFE IN DIRTY/CORROSIVE CONDITIONS

NON CORROSIVE HDPE ROLLER FACE

ELECTRICITY SAVINGS

LOWER NOISE

LIGHTER THAN STEEL ROLLER

STATIC STONE GUARD

MACHINED FACE

CARRIES SAME LOAD AS STEEL ROLLER

HDPE sleeve

- High-density Polyethylene
- Impact and wear-resistant
- Lightweight, corrosion & UV resistant
- Low friction reduces duff build-up
- Machined surface provides excellent TIR & results in lower noise

Internal steel sleeve

- Strengthens the HDPE tube
- Provides positive lock with bearing housing ensuring that it does not pull away

Rigid plastic bearing housing

- Glass filled Polypropylene

Bearing

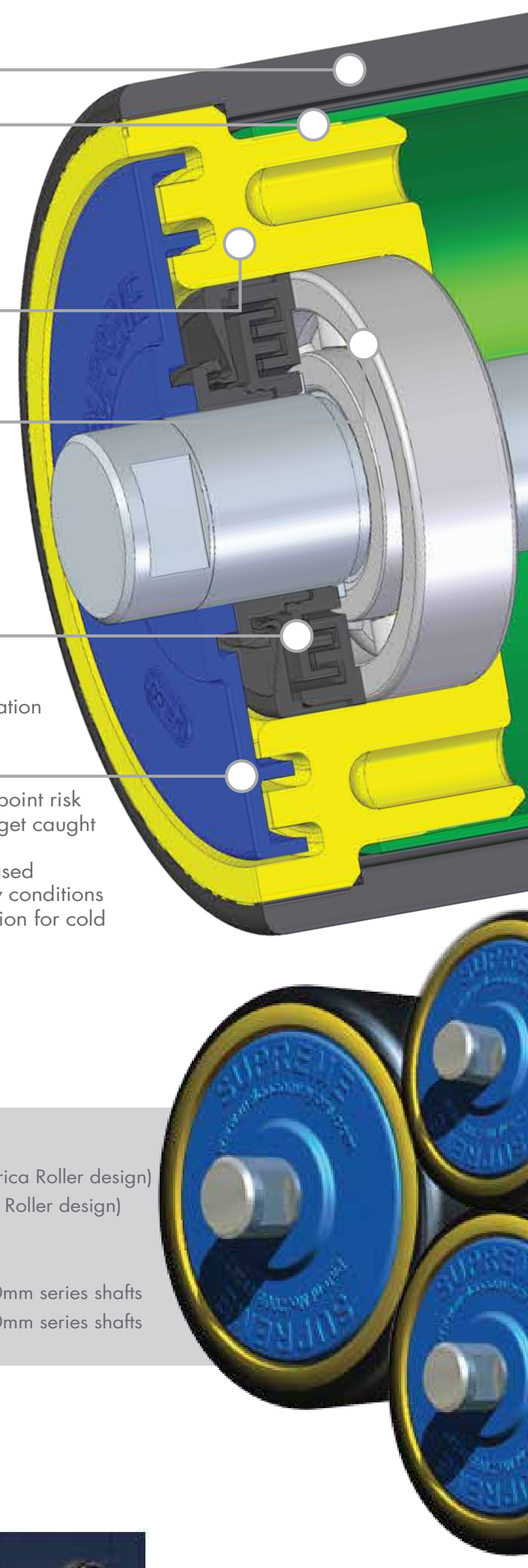
- Deep groove ball bearing as required from loading standard calculations
- Standard as LFD brand, but can be supplied as SKF or other
- Supplied as open, ZZ or 2RS as per application requirements
- C3, C4 or clearance

Internal seal

- Melco/Rulmeca standard seal
- Contactless or hermetic seal options, as required by the application

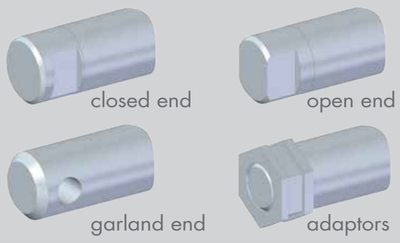
Static face - Stoneguard

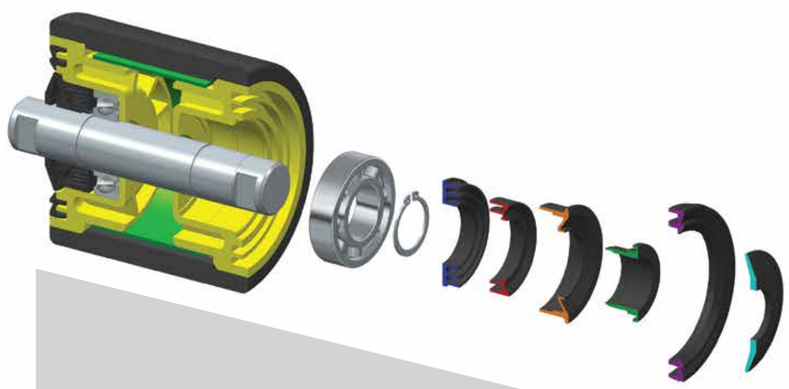
- Provides a safer roll, reducing nip-point risk
- Prevents roll from seizing if stones get caught between roll and roller bracket
- Additional labyrinth seal for increased sealing, especially in wet and dirty conditions
- Can be in "flinger seal" configuration for cold or humid conditions



Shaft ends

Rollers can be supplied with a range of shaft end configurations as required for installations.





V3 SUPREME ROLLER

In cold and wet conditions the V3 version of the SUPREME roller is recommended to prevent ice accumulation inside the seal cavities on intermittent operations. The static stone guard is replaced with a cover cap, and a flinger seal is included to ensure optimal sealing.

Size availability

- 102mm diameter – 25mm series shaft (Africa Roller design)
- 114mm diameter – 25 series shaft (Africa Roller design)
- 127mm diameter – 25mm series shaft
- 133mm diameter – 25mm series shaft
- 152mm diameter – 25mm, 30mm and 40mm series shafts
- 159mm diameter – 25mm, 30mm and 40mm series shafts
- 178mm diameter – 40mm series shaft

Lower mass

The SUPREME roller is lighter than an equivalent steel roller, thereby ensuring safer handling, especially on larger rollers.

The resultant lower rotating mass reduces the start-up torque required for the conveyor.

	Steel		HDPE		% Change	% Change
Roller Size	Mass (kg)	Rotating Mass (kg)	Mass (kg)	Rotating Mass (kg)	Mass	Rotating Mass
127/340/25	6.8	5.5	5.3	4.0	– 22%	– 37%
127/390/25	7.5	6.0	5.9	4.4	– 21%	– 36%
152/450/30	12.2	9.7	10.6	8.1	– 13%	– 19%
152/560/30	14.4	11.3	12.5	9.4	– 13%	– 20%

Quieter Roller

Conveyor noise is an environmentally sensitive issue.

The HDPE rollers feature a significantly lower noise emission than steel rollers.

Rollers can be tested in a certified acoustic chamber at Rulmeca Germany.

	152 diam			127 diam		
Belt speed	Steel (dBA)	HDPE (dBA)	Diff (dBA)	Steel (dBA)	HDPE (dBA)	Diff (dBA)
4,2 m/sec	78	65,5	12,5	74,6	65,5	9,1
3,2 m/sec	73,5	62,5	11	67,3	62,5	4,8
1,2 m/sec	54,5	52,8	1,7	53,6	51,5	2,1

Ilo Port Peru

Sasol Shondoni South Africa (Coal)

Talvivaara Finland (Nickel)

RULMECA

Moving ahead

MELCO CONVEYOR EQUIPMENT

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