

**Cement**

Chemicals  
Defence  
Fibre, paper & tissue  
Food & beverage  
Marine & port operations  
Metals

**Mining & minerals**

Oil & gas  
Panelboard

**Power generation**

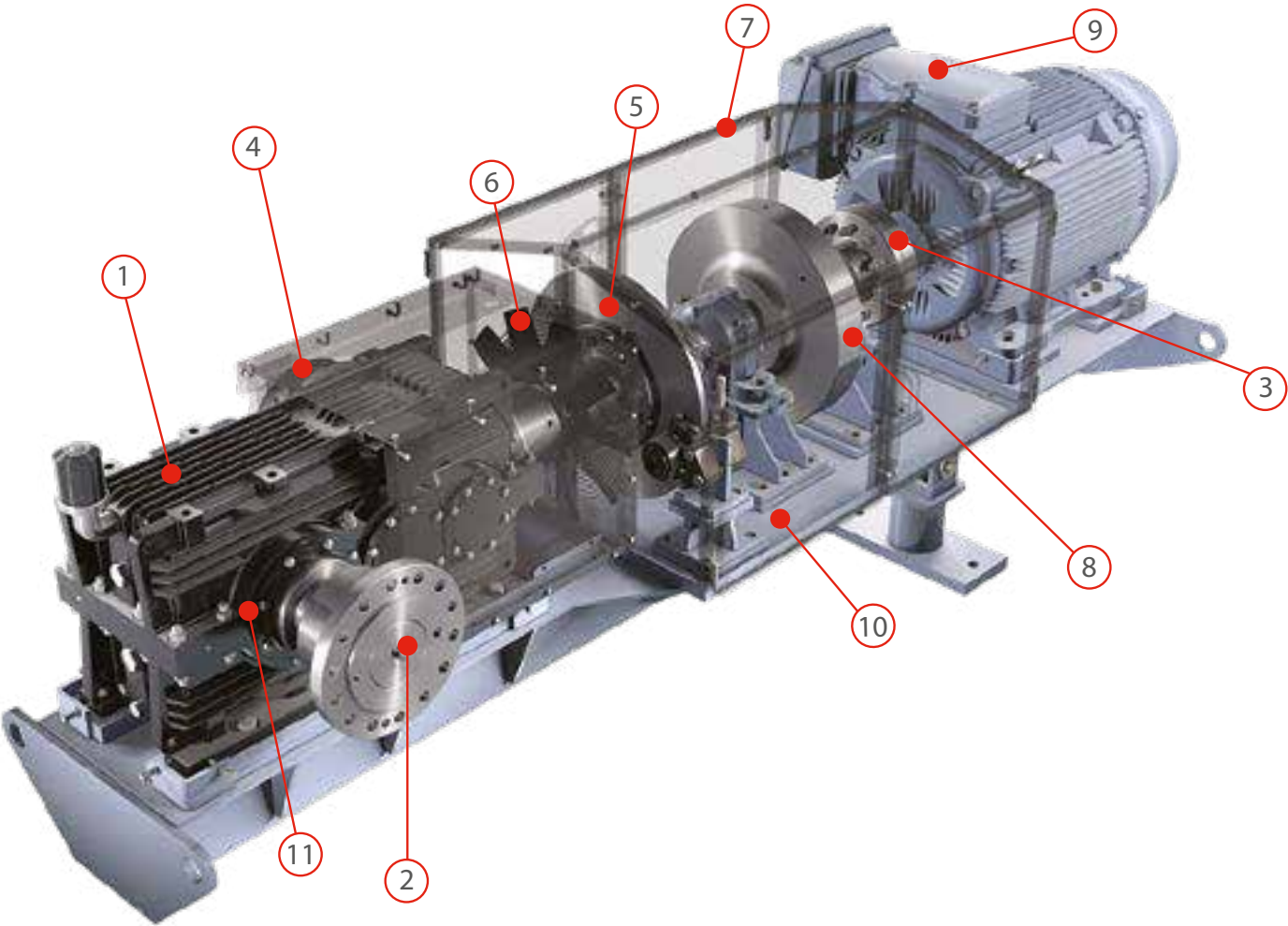
Rail  
Rubber  
Sugar  
Water & wastewater

## CX Series

Mechanical power transmissions  
for conveyor applications

## CX – Walks the walk, talks the torque

The CX series offers exceptional field proven levels of performance, versatility and life expectancy, which exceed the demanding requirements of modern conveyor applications and work to maximise the availability of our customers’ processes wherever they are in the world.



David Brown Santasalo can supply any CX series gearbox individually or as a complete conveyor drive unit comprising some or all of the following parts:

- 1. CX series gearbox
- 2. Low speed output couplings
- 3. Conventional or fluid type input couplings
- 4. Holdback/backstop
- 5. Disc or drum brakes
- 6. Fan
- 7. Safety guards
- 8. Fly wheel (inertia wheel) with independent support bearings
- 9. Electrical motors (HV or LV)
- 10. Base frame in floor mounted, swing base or tunnel mount versions with torque arm
- 11. Output coupling guard

### CX model range

CX series characteristics		Unit size	Typical motor power *
Housing material	Grey iron or high strength ductile iron	210	55kW
Housing construction	Horizontal split case	240	90kW
Ambient temperature range	-10°C to 50°C +	275	132kW
Nominal rated sump temperature	90°C / 194°F (Can be rated at our customers’ preferred temperature)	300	160kW
Power capacity	55kW to 3,000kW	336	250kW
Input speed range	To suit 4, 6 and 8 pole motors (including variable speed) at 50Hz and 60Hz supply	365	315kW
Ratio range	8.4/1 to 47.1/1	400	400kW
Output shaft options	Solid, double extended and hollow shaft versions with keyed and keyless options	440	500kW
Integral holdback	Standard and load sharing versions	480	710kW
		525	800kW
		560	1,120kW
		620	1,250kW
		675	1,600kW
		720	1,800kW
		800	2,000kW

\* Typical selection using right angled triple reduction version at 1450rpm motor speed, 70rpm approximate output speed sizes up to 525, 60rpm sizes 560 and above. Mechanical service factor 1.5, thermal service factor 1 and bearing lives >60,000 hours. Note these are typical selections; please contact us with your full application details for actual selection.

David Brown Santasalo’s CX series delivers the following core benefits



#### Enhanced thermal capacity

The improved thermal performance of the CX series has been extensively tested, both with field trials in some of the highest ambient temperature mining environments, as well as under controlled conditions on our own dedicated test beds. Our 1MW conveyor test bed has been used to prove the advantages of the design process. In addition, the data collected enables accurate prediction of case and sump oil temperatures, which is critical when managing gearbox temperatures when running at very high ambient temperatures.



#### Improved bearing life

Theoretical bearing lives can only be achieved in practice by a well designed gearbox configuration and adequate lubrication. The extensive prototype testing carried out on the CX series, backed up by field experience, means that the user can be confident that the desired bearing lives can be achieved. This enables our customers to avoid unplanned outages, ultimately leading to lower maintenance costs.



#### Improved and optimised lubrication design

Extensive prototype testing has ensured that the CX’s simple internal lubrication design is functional across a wide range of operating temperatures, gearbox orientations and running speeds. With increasing use of variable speed drives for conveyors it is essential that users can be confident that their drives are being adequately lubricated, even when running at creep speeds. Start ups from cold oil conditions have been simulated to ensure that even at low temperature start up, all bearings and gears are adequately lubricated.



#### Low noise, high performance

With noise pollution being an ever increasing factor in the specification and design of industrial machinery, gearboxes designed for low noise are a must. The CX series incorporates the latest design and manufacturing technologies to optimise gearing for low noise operation, with the theoretical results being verified by thorough test rig testing and independently verified noise measurements. In most cases this means a CX gearbox will allow the conveyor to meet current health and safety guidelines, without the costs of additional noise attenuation.

