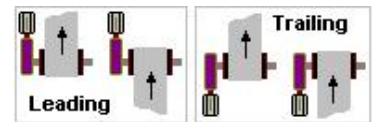
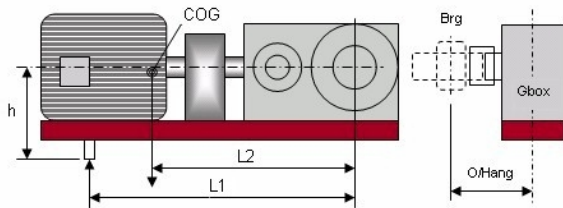


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Project	<b>AS 1403 Example Calculation</b>	Designed By	<b>P Burrow</b>
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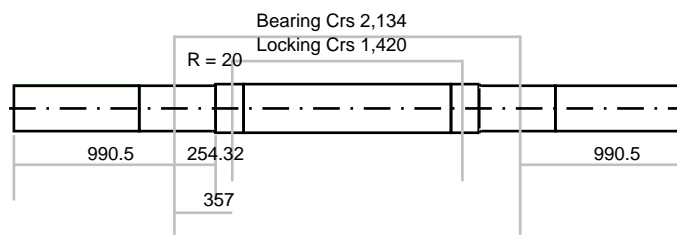
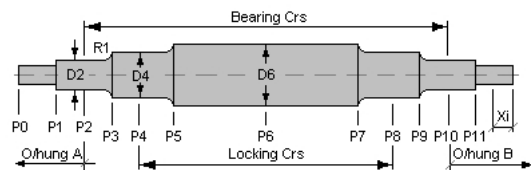
Conveyor Number	CV 101	Pulley Type	Drive
Pulley Description	As 1403 Example	Torque Reversals	Yes
Belt Speed	3 m/s	Design Factor of Safety	1.2
Pulley Diameter O/Steel	1046 mm	Belt Tension T1 Start	516.25 kN
Pulley Lagging thickness	12 mm	Belt Tension T2 Start	320.59 kN
Pulley Mass	5,286 kg	Belt Tension T1 Run	300 kN
Shaft Bearing Centres	2,134 mm	Belt Tension T2 Run	200 kN
Locking Element Centres	1,420 mm	Belt Wrap Angle	180 degrees
Bearing Housing Type	SSN/SD	Belt Contact Angle to T1	0 degrees
Shaft Material	CS1020	Locking Element Type	RFN7012
Shaft UTS	410 MPa	Locking Elem. k factor fig.6	1.3
Shaft Endurance Limit	185 MPa	Bearing k factor AS1403 fig.5	1.5
Shaft Modulus 'E'	207,000 MPa	Correction factor AS1403 fig.3	0.130
Shaft Size factor, Ks fig.1	1.78		
Corr.factor kstep AS1403 fig.4	1.37		

Single or Dual Drive	Dual	Has Torque Arm	No
Gearbox assembly mass	12500 kg	Drive Thrust Orientation	Leading



Dimension h	0 mm
Dimension L1 Torque Arm	4200 mm
Dimension L2 COG to Shaft	1900 mm
O/hung Lever Arm end A	990.5 mm
O/hung Lever Arm end B	990.5 mm

Half Resultant Load, run	250 kN	Half Resultant Load, start	418.42 kN
Bearing Designation	22260	Calculated Bearing Life L10h	418,810 hrs
Torque on Shaft	52,339.05 Nm	Bending Moment at Bearing	78.86 kNm
Lock. Elem Torque Rating	153,000 Nm	Bending Moment at Shoulder	128.63 kNm
		Bending Moment at Locking Element	164.8 kNm
Bearing Diameter Selected	280 mm	Calculated Dia at Bearing D2	250.8 mm
Shaft Shoulder Radius R1	20 mm	Calculated Dia at Shoulder D3	278.5 mm
Selected Dia at Locking Element	300 mm	Calculated Dia at Locking Element D4	295.1 mm
Shaft Dia at centre D6	300 mm	Linear Deflection	0.817 mm
Shaft Linear Deflection	0.038 % brg span	Angular Deflection	0.0008 radians



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