

# GSI Coiled Duct vs Traditional Duct – Key Differences



Traditional Duct	GSI Coiled Duct (GCD)	
<p><b>SPEED</b></p> <p>110/100mm 6m sticks, jointing collars with rubber seals every 6m and spacer clips every 1m</p> <p>Duct can disjoint easily, especially around bends</p> <p>Multiple packing on road side</p> <p>Position of sticks along roadside How long to position ??</p> <p>Size of trench</p> <ul style="list-style-type: none"> <li>• Width = 450 or 600mm</li> <li>• Depth = 970mm</li> </ul> <p>Large trench: imported gravel creates greater environmental damage. Excess material needs to be removed. Creates French drains High environmental impact</p> <p>Multiple joins along route</p> <p>Needs 650mm cover. (Requires deep trench to overcome poor duct compression strength)</p> <p>On average 120m installed per shift</p>	<p><b>SPEED</b></p> <p>110/88mm GCD can be delivered in continuous lengths of up to 600m</p> <p>Cannot disjoint. Continuous GCD follows the flow and contour of the trench</p> <p>Uncoiled from an A frame in one process which means A frame does not have to remain on the roadside</p> <p>600m reel can be uncoiled in 10 minutes</p> <p>Size of trench - about 70% smaller</p> <ul style="list-style-type: none"> <li>• Width = 300mm</li> <li>• Depth = as little as 420mm</li> </ul> <p>Small trench: No imported materials. Graded 'as dug' material used for backfill Big reduction in ecological/environmental damage. No French drains created</p> <p>Continuous duct - no joins between chambers</p> <p>Only needs 300mm cover (due to increased duct strength)</p> <p>480m installed per shift based on trial output</p>	<p><b>F A S T E R</b></p>
<p><b>SAFETY</b></p> <p>Every stick, jointing collar with seal and spacers need to be fitted by persons working in trench</p> <p>Air testing is carried out every 2 sticks in length (x4) which equates to 20min/hr. Air testing mandatory from chamber to chamber at 0.14psi</p> <p>Road worker safety: Excessive manual handling needed to fit sticks; multiple awkward lengths to work and handle</p> <p>Road user safety: long periods of TM</p> <p>Increased vehicle movements for import and disposal of materials</p>	<p><b>SAFETY</b></p> <p>GCD is fed in from side of trench</p> <p>No air testing needed. Air tight by design. Duct air tested in factory at 130psi</p> <p>Road worker safety: Mechanically installed. Manual handling only required at chambers</p> <p>Road user safety: periods of TM reduced due to no working in trenches to install and test duct. Replacement of multiple sticks, collars and spacers by just 2 continuous lengths of GCD</p> <p>Reduced vehicle movements – less materials required</p> <p>Trenches 70% smaller. Expected to reduce man hours by some 3,750 hours (125 days) over 20km route @ 480m/day H&amp;S risks reduced &gt;60%</p>	<p><b>S A F E R</b></p>

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<p><b>STRENGTH</b></p> <p>Compressive strength around 450N</p> <p>Is easily damaged, broken and/or crushed with spades, diggers and other plant</p> <p>Digger operators will break duct in the ground before they know it is there</p> <p>Does not recover after compression</p> <p>Straight corrugated outer wall does not absorb stresses. Stress is focussed</p> <p>Ducts are expected to fill with water within days. Air tests only valid at time of test</p>	<p><b>STRENGTH</b></p> <p>Compressive strength around 2500N</p> <p>GCD will not cut with spades. Even diggers have difficulty causing damage</p> <p>Digger operators can ‘feel’ GCD in the ground without causing damage</p> <p>Compressed GCD will show significant recovery</p> <p>Spiral outer wall absorbs and spreads stress</p> <ul style="list-style-type: none"> <li>• Easy attachment to chambers with spiral connectors;</li> <li>• Easy stripping of duct with spiral cutting tools</li> </ul> <p>Plugged ducts should remain dry throughout life. Air tight environment should be life long</p>	<b>S T R O N G E R</b>
<p><b>COST</b></p> <p>Cheaper to purchase More expensive installed costs</p> <p>Chambers required to accommodate changes in direction and elevation</p>	<p><b>COST</b></p> <p>More expensive to purchase Cheaper installed costs</p> <p>GCD accommodates changes in direction and elevation. Fewer Chambers are required</p> <p>Installed costs cheaper by around 18%</p>	<b>C H E A P E R</b>
<p><b>Other attributes</b></p> <p>Each duct is a hollow single bore</p> <p>Retro-fitting chambers not easy to create robust sealed connections</p> <p>Old duct network must be removed before new duct can be installed</p>	<p><b>Other attributes</b></p> <p>A variety of ducts are available from single smooth wall up to 9 integral colour coded ducts</p> <p>Retro-fitting chambers is easy and robust with GCD</p> <p>GCD can be installed above old duct network, leaving old ducts untouched</p>	

*Please visit our website for further information of all GCD features and benefits*

***GSI Coiled Duct: Faster + Safer + Stronger + Cheaper = Better***



***Ducting for the Future***

