

Ridgeline

Ridgeline + Ridgeloak – Data Sheet

Description

Ridgeline™ is a premium corrugated stainless steel piping system engineered for all plumbing applications, including hot and cold water plumbing and central heating systems. The system comprises:

Ridgeline Piping Core Construction:

- **Primary Layer:** Marine grade 316L stainless steel with engineered corrugations that provide maximum flexibility while delivering superior crush and burst performance.
- **Protective Layer:** High-grade polyethylene (PE) outer sleeve that protects the stainless steel from building materials containing chlorides, and makes pulling the tube through concealed spaces much easier. This layer makes no contact with drinking water.

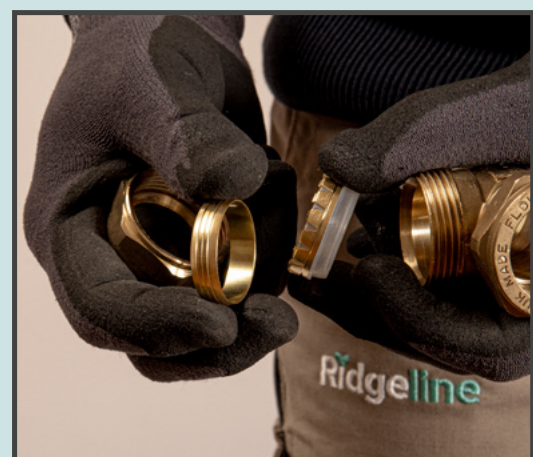
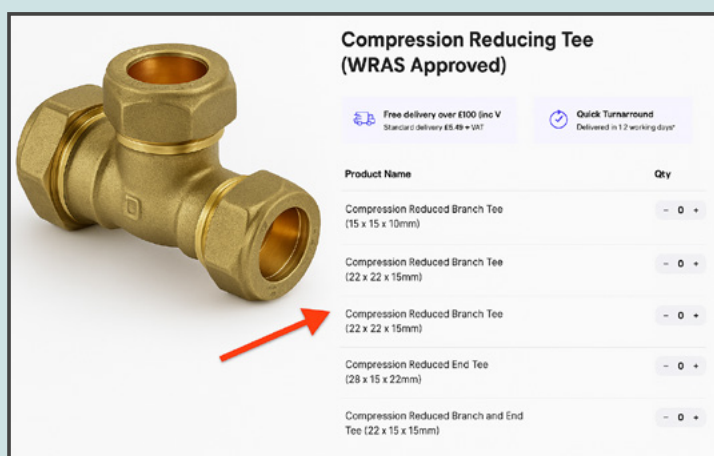
Ridgeloak™ Fitting Connection System:

- Utilises standard EN 1254 compression fitting bodies and nuts.
- Replaces traditional olive with engineered RidgeLock™ sealing ring.
- Creates a robust mechanical connection suitable for concealed installations.
- Allows connection on site, or at the merchant, with any existing compression fitting for copper tube.
- Available to match tube sizes: R-15, R-22 and R-28 only.

Note: Ridgeline is also compatible with our P1 range of fittings, outlined in the Ridgeline + P1 Data Sheet.

Note: Ridgeloak fittings are designed to be completely interchangeable with all EN 1254 compression fittings for copper tube, widely available from merchants across the UK.

- Use any WRAS approved EN 1254 compression fitting.
- Replace the copper olive with a Ridgeloak sealing ring.
- WRAS + KIWA reg 4 approved connection for Ridgeline tube.



Dimensions of Ridgeline tube

	R-15	R-22	R-28
Outer Diameter (with cover)	15 mm	22 mm	28 mm
Inner Diameter	11 mm	18 mm	23 mm
Tubing Wall Thickness	0.25 mm	0.25 mm	0.25 mm
Polyethylene Cover Thickness	0.80 mm	0.80 mm	0.80 mm

Note: Ridgeline pipe is also available in larger diameter sizes (R-35 to R-54), but these sizes are only compatible with P1 fittings system.

Lengths, weight and handling

Ridgeline pipe is available in lengths from 25m up to 500m. Long continuous lengths are ideal for project work, enabling precise measurement and cutting on-site to minimise waste. Shorter lengths are supplied in convenient boxed coils.

For efficient handling of longer lengths, our dedicated spool roller system ensures tangle-free dispensing. Check weight of long length spools to ensure site suitability.

Reduced weight per m (vs. copper) reduces risk of theft on site.

Materials

- Corrugated tubing: 1.4404 (316L) stainless steel conforming to BS/EN 10088
- Target 80% recycled content in stainless steel

Working Parameters

- Suitable for indoor and outdoor use.
- Can be buried without additional protection or sleeving.
- 10 bar up to 90C

Corrosion Protection & Pressure Testing

- Superior corrosion resistance compared to copper tube in UK drinking water conditions (verified through independent testing at Lancaster University)
- Engineered for domestic water systems
- All installations must be pressure tested to relevant standards before commissioning

Freeze Protection

- Corrugated design provides superior resistance to single freeze events compared to rigid tube
- Corrugations can accommodate expanding ice
- Protection against freezing should always be primary approach
- Long continuous runs without fittings recommended in freeze-risk areas
- Repeated freeze/thaw cycles may cause permanent deformation

Insulation / Lagging

- For many applications insulation / lagging may be required
- Insulation type and thickness should be tailored to specific installation needs for optimal performance
- The polyethylene cover ensures smooth, effortless application of your chosen insulation
- Ridgeline design supports customised insulation solutions for a secure fit

Installation Parameters

Bend Radius

- Corrugated design enables exceptional flexibility without kinking
- Bend Radius is the diameter of the tube and can achieve adjacent (back-to-back) bends where required
- Full kink resistance maintained even at extremely tight bends
- No special tools needed for bending
- 90 degree bends possible instead of elbow fittings

Support Spacing

- Pipe supports and clips should be installed at the below recommended intervals:

R-15	R-22	R-28
1.2 m	1.8 m	1.8 m

Required Tools

- Metal wheel pipe cutter
- Utility knife (for removing protective cover)
- Spanner/wrench for RidgeLock™ connections

Connection Assembly

- Hand-tight plus 3 half-turns with spanner. Ensure sealing ring is correctly seated in third corrugation valley with three peaks visible ahead of the ring.

RidgeLock™ Fittings and Sealing Rings

The RidgeLock™ system combines standard EN 1254 compression fitting components with our engineered sealing ring. The sealing ring's teeth mechanically interlock with the tube's corrugations, creating a robust, reliable seal that maintains its integrity even when subjected to bending forces.

- Universal access through readily available EN 1254 compression fittings
- Simple replacement of standard olive with RidgeLock™ sealing ring
- Available for R-15mm, R-22mm and R-28mm tube sizes
- Fully interchangeable with P1 fittings range on these sizes

Damage and Repair

Damage to Corrugated Tube

- If the tube becomes damaged it can be repaired by using a Union fitting.

Damage to Outer Sleeve Layer

In locations where the tube may contact building materials containing chlorides (screed floor, plaster, cement):

- Any damage causing a hole in the cover must be repaired
- Use self-amalgamating silicone tape (available from Ridgeline)

WRAS and KIWA Reg 4

Ridgeline™ tube + RidgeLock™ (RidgeLock™ sealing ring + EN 1254 WRAS approved compression fitting) are approved to WRAS and KIWA Reg 4.



Interrelation with Other Systems

Copper Integration

- RidgeLock: Use any EN 1254 compression fitting, replacing copper olive with RidgeLock™ sealing ring on Ridgeline side

Plastic System Connection:

- Connect via male/female BSP thread combination

Specialist Variants

The Ridgeline plumbing system, including pipe, RidgeLock™ and P1™ fittings, is designed for a range of plumbing applications. We also offer specialist variants:

- Ridgeline Underfloor: Specifically designed for underfloor heating systems
- Ridgeline Flexis: Flexible connectors to replace braided rubber flexis

Note: These specialist variants are not directly compatible with regular Ridgeline pipe or RidgeLock™ and P1™ fittings. Please contact us for more information.

Pressure drop

Pressure drop (Pascals) and velocity (m/s) is given below for different flow rates and tube diameters..

Flow (L/min)	Flow L / sec	R-15		R-22		R-28	
		m/s	Pa	m/s	Pa	m/s	Pa
2.50	0.0417	0.44	797	0.16	56	0.10	15
5.00	0.0833	0.88	3,137	0.33	216	0.20	58
7.50	0.1250	1.32	7,019	0.49	480	0.30	128
10.00	0.1667	1.75	12,443	0.65	847	0.40	225
12.50	0.2083	2.19	19,410	0.82	1,317	0.50	349
15.00	0.2500	2.63	27,918	0.98	1,891	0.60	500
17.50	0.2917	3.07	37,968	1.15	2,568	0.70	679
20.00	0.3333	3.51	49,560	1.31	3,349	0.80	885
22.50	0.3750	3.95	62,695	1.47	4,233	0.90	1,118
25.00	0.4167	4.38	77,371	1.64	5,221	1.00	1,378
27.50	0.4583	4.82	93,590	1.80	6,312	1.10	1,666
30.00	0.5000	5.26	111,350	1.96	7,507	1.20	1,981

Note: Ridgeline pipe is also available in larger diameter sizes (R-35 to R-54), but these sizes are only compatible with P1 fittings system.



Scan QR code to access brochure, certifications and other technical documents, or visit www.RidgelineTubes.com