DURAG GROUP

DURAG D-LL 7XX
Fiber optic systems

Flame monitoring for difficult environments

- Flexible hose or fixed pipe connection for installation of the fiber optic system
- Use under complex conditions such as tilting burners or in confined spaces
- Use at high temperatures or with high vibrations



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ONE COMPANY | COMPREHENSIVE SOLUTIONS

- **Local support, global reach:** benefit from local commissioning and services through our extensive network of partners and corporate organizations, ensuring prompt assistance and expertise wherever you are. There's no need to send the device back to factory.
- **One company, comprehensive solutions:** DURAG GROUP offers a comprehensive solution for your plant, from combustion optimization and safety to environmental compliance and atmospheric impact monitoring.

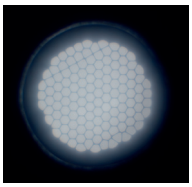
FEATURES AND BENEFITS

- **Flexible design for versatile applications**
  Available in rigid pipe or flexible hose versions; lengths of 20 m and more possible to suit complex setups.
- **Superior optical performance**
  Approximately 130 fibers ensure a consistently clear optical view, even in harsh environments.
- **Continuous operation**
  The optical system is cleaned during normal operation.
- **Precise, reproducible alignment**
  Simplified re-alignment ensures accurate positioning of the optics after each maintenance.
- **Compatible with various flame scanners**
  Supports different flame monitors without requiring modifications to the fiber optic system.
- **Enhanced durability**
  Robust fiber bundle design ensures long service life and high resistance to wear.
- **Independent of Ex-certification**
  Fiber optic system is not part of the flame monitor's Ex-certificate, offering additional flexibility in hazardous area installations.
- **Effective protection of optical flame monitor**
  Shields the monitor from excessive heat, vibration, and contamination for reliable long-term performance.

TECHNICAL DATA

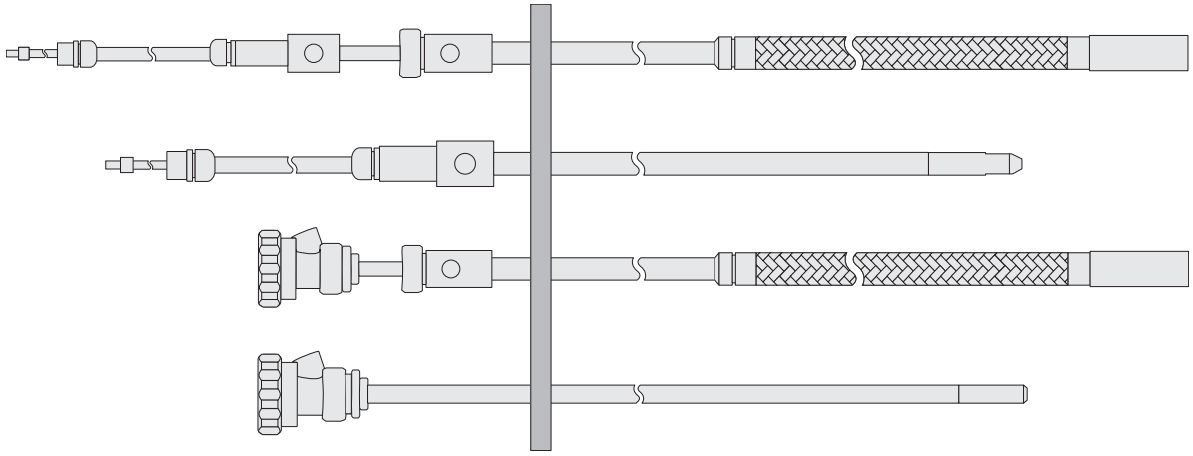
Spectral transmission	UV, IR
Opening angle	6°
Ambient conditions	For fiber optic cable: –40 ... +350 °C (–40 ... +662 °F)
Connections	Purge air G ½″ Cooling air (only D-LL 703 and D-LL 701) G ½″
Weight	• D-LL 701: Approx. 1.6 kg (3.5 lbs) + 1 kg/m (2.2 lbs/m) • D-LL 702: Approx. 1.6 kg (3.5 lbs) + 1 kg/m (2.5 lbs/m) • D-LL 703: Approx. 3 kg (6.6 lbs) + 1 kg/m (2.5 lbs/m) • D-LL 704: Approx. 2 kg (4.4 lbs) + 1 kg/m (2.5 lbs/m)
Material	Intermediate tube/guide tube: Stainless steel 1.4301

Fiber optic systems	Applicable flame sensors and flame monitors
D-LL 701, D-LL 702 (direct connection)	D-LE 701
D-LL 701, D-LL 702 (connection via special adapter)	D-LE 703, D-LX 701, D-LX 710, D-LX 721
D-LL 703, D-LL 704	D-LE 703, D-LX 701, D-LX 710, D-LX 721, D-LX 27x0

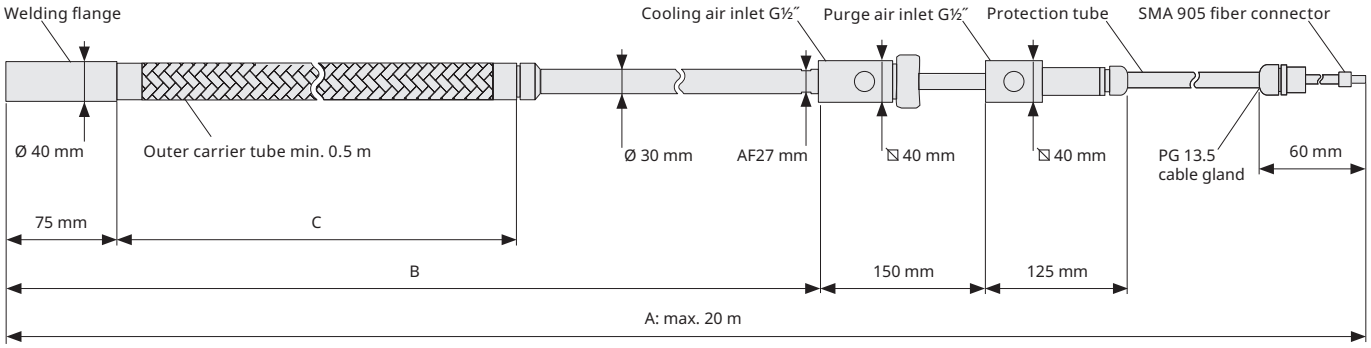


Cross-section through the optical fiber. The high number of individual fibers allow for longer lifetime of the fiber optic system and a clear view even in harsh conditions.

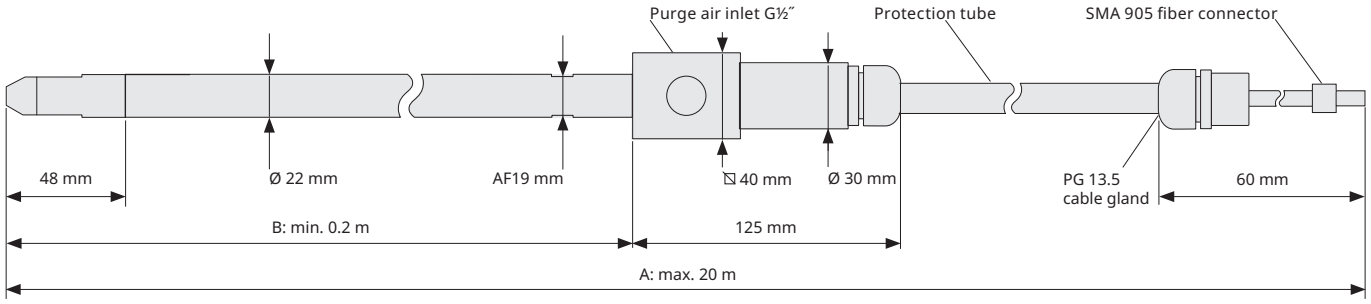
FIBER OPTIC SYSTEMS | POSITIONING IN RELATION TO THE BURNER PLATE (GRAY BAR)



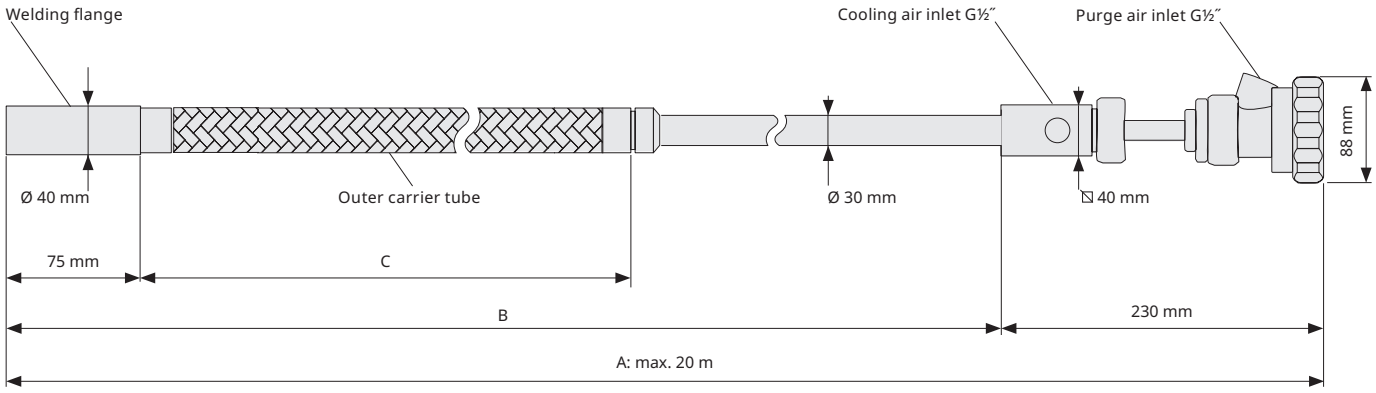
D-LL 701 | FLEXIBLE FIBER OPTIC SYSTEM FOR D-LE 701



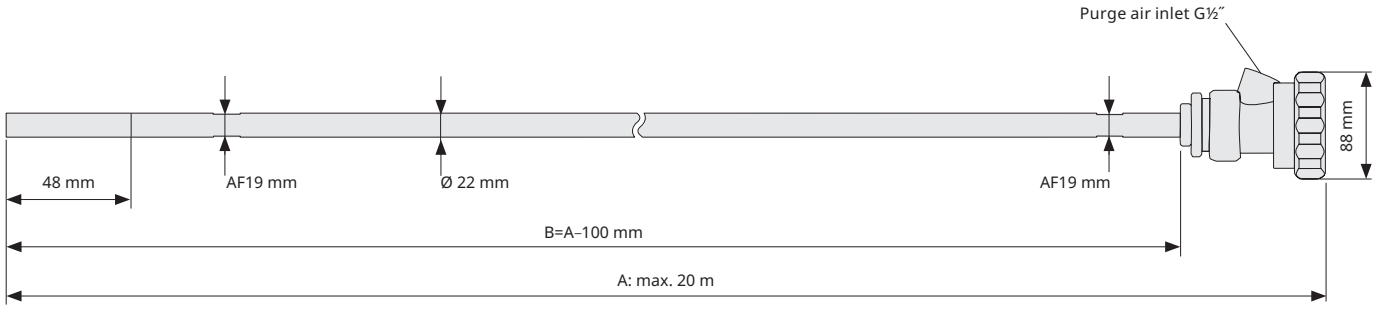
D-LL 702 | RIGID FIBER OPTIC SYSTEM FOR D-LE 701



D-LL 703 | FLEXIBLE FIBER OPTIC SYSTEM FOR D-LE 703, D-LX 701, D-LX 710, D-LX 721 AND D-LX 27X0



D-LL 704 | RIGID FIBER OPTIC SYSTEM FOR D-LE 703, D-LX 701, D-LX 710, D-LX 721 AND D-LX 27X0



A, B, C: DEFINED BY CUSTOMER, LENGTH SPECIFICATIONS REQUIRED AT ORDER.

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