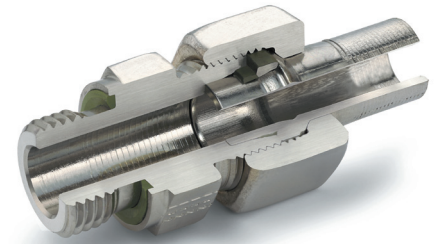


# Long-term Low Temperature Test for Fittings

Hydraulic connectors withstand temperatures down to minus 60 °C in a 1000 hour test.



Anyone who travels on the Transsib, the Trans-Siberian Railway, the longest rail journey in the world at more than 9000 km from Moscow to Beijing, experiences severe temperature variations.

The strongest December frosts in 50 years prevailed in 2012. At that time, temperatures even went as low as -57 °C. The ground frosts usually extend into June and then in July and August temperatures of +30 °C are possible.

Because of these climate conditions, Russian railway standards till now do not permit the use of elastomeric sealing elements.

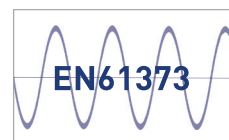


## Contact:

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**Toll-free number: 1-800-27 27 537**  
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## Fierce cold tests successfully passed.

Parker has now been able to demonstrate in a pilot project that soft-sealing fittings types can safely seal even down to minus 60 °C.



ENGINEERING YOUR SUCCESS.

# Test results and standard for new norms

Parker engineers and technicians wanted to establish the facts and developed a test series for which there was no standard model: they devised a long-term lowest temperature test for all soft-sealing stud connectors Form E/Form F\*. The reliability of the NBR material normally used as standard was put to the test when connected to the following DIN fittings systems: EO cutting ring, EO-2, EO2-FORM and 24° DKO sealing cone in steel and stainless steel material.

All the tube connector systems of the series nominated above passed the temperature test. The metallic cutting ring connector, the soft-seal EO-2/EO2-FORM systems all passed the simulated worst-case conditions. On the screw-in side too, the O-rings and ED seals installed have proven themselves absolutely reliable.

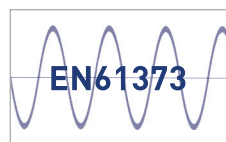
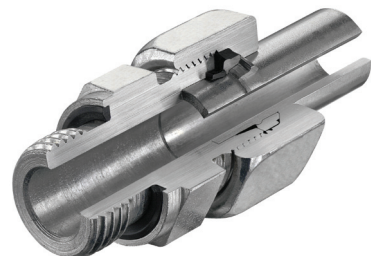
With this project Parker did pioneering work which set new standards for future norms and with its high-performance product programme, is an important player in the onward development of the transportation industry.

IRIS (the International Railway Industry Standard) is a world-wide system for the assessment of suppliers to the rail vehicle industry. IRIS interprets the internationally recognised ISO 9001 standards.

The aims of IRIS are:

- Quality improvements within the complete value creation chain
- Effective, efficient assessment of suppliers
- Minimising costs for manufacturers and suppliers
- More extensive information and accessibility improvement

Moreover, shock and vibration testing to DIN EN 61363 at the end of 2013 attests the special performance of Parker tube connectors under mechanical stress.



\*Form E: ED metric sealing: ISO 9974-2; Form F: O-Ring (retaining ring) metric: ISO 6149-2/3 UN/UNF: ISO 11926-2/3



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