Comparison of built-in and swaged type couplings

ContiTech

Built-in/Bonded coupling

Swaged/Crimped coupling







Standard	API Spec. 7K / 16C / 17K	API Spec. 7K
Technology	All reinforcement cables are adhesively bonded to the coupling body	Only outer reinforcement layer (and in some cases the innermost reinforcement layer) is directly in contact with the coupling
Bore type	Full bore/flow, no flow restriction	Never full bore, there is always a flow restriction. In Choke Lines it may lead to dangerous erosion in case of a kick
Sealing mechanism	Chemical and mechanical bond between metal and rubber	Based on pressure buildup when the coupling is mounted, subject to stress relaxation at elevated temperatures



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VS.



Field experience	50+ years	Limited, relatively new technology
Temperature limits	Suitable for high fluid temperatures	Limited fluid temperatures
Pressure limits	Meets high pressure rating requirements up to 20,000 psi (1380 bar) working pres.	Limited pressure capability, max. 5,000 psi (345 bar) working pres.
High frequency pulsations	FSL0/FSL1/FSL2	FSL1/FSL2



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VS.



Coupling rigid length	Shorter coupling	Longer coupling
Neck reinforcement	Built-in neck reinforcement with the ability to customize	Does not have neck reinforcement, which might lead to shortened service life
Lead time	Generally longer lead time, but patented ContiTech post assembling technology available in dedicated workshops significantly cuts lead time	Generally shorter lead time
Service life	Generally longer service life	Generally shorter service life

