Evolution® vs. VCS®

This document is intended to take you through the differences between Evolution® and VCS®, to highlight why you may see Evolution® quoted in addition to a standard VCS®, giving you the option of the most innovative isolation gasket on the market.

	EVOLUTION®	VCS®
GASKET IMAGE		
PHYSICAL GASKET CHARACTERISTICS		
	EVOLUTION®	**VCS®**
GASKET THICKNESS	0.125” / 3.2mm	0.260” / 6.6mm
GASKET ID MATCHING PIPE BORE?	Yes	Yes
RETAINER MATERIAL	316L Stainless Steel core fully encapsulated by an innovative, proprietary high dielectric strength coating specially designed for the oil and gas industry.	316L Stainless Steel core, laminated on each side by Glass Reinforced Epoxy (GRE).
SEALING MATERIAL	Dual Seal Design: • *Primary* - Pressure Activated GYLON ID seal • *Secondary (Fire Safe Seal)* - Inconel 718 coated C-Ring	PTFE Spring Energized Seal or FKM O-Ring
ID SEAL	Yes	No
IDENTIFICATION	Easily identified on a tag and on gasket retainer.	Laser marked on the gasket retainer
APPLICATIONS		
	EVOLUTION®	**VCS®**
FIRE SAFE	Yes	No
RTJ FLANGES	Yes	Yes
MISMATCHED RTJ TO RF FLANGES	Yes	Yes
SUITABLE WITH H_2S	Yes	Depends on Application

SUPPLIED BY: Anode Engineering
www.anodeengineering.com
PHONE: +61 7 3801 5521
EMAIL: admin@anodeengineering.com

SUITABLE WITH STEAM	Yes	No
EXOTIC CORE NECESSARY	No	Yes
AGGRESSIVE MEDIA	Yes	Depends on Application
SPECIFICATIONS		
	EVOLUTION®	**VCS®**
MAXIMUM OPERATING TEMPERATURE	500 °F/260 °C	392 °F/200 °C
MINIMUM OPERATING TEMPERATURE	-300 °F/-184 °C	-200 °F/-128 °C
MAXIMUM PRESSURE RATING	2500#/API 15K	2500#/API 10K
SIZES OFFERED	½”-36” (DN15-DN900)	½”-60” (DN15-DN1500)
PHYSICAL PROPERTIES		
	EVOLUTION®	**VCS®**
WATER ABSORPTION	0.03%	0.10%
COMPRESSIVE STRENGTH	63,000 psi	66,000 psi
DIELECTRIC STRENGTH	1,400 vols/mil	800 volts/mil
FLEXURAL STRENGTH	80,000 psi	LW 65,000 psi / CW 52,000 psi
TENSILE STRENGTH	43,000 psi	LW 40,000 psi / CW 32,000 psi
PERFORMANCE		
	EVOLUTION®	**VCS®**
PERMEATION	No	Yes
EMISSIONS (SHELL MESC 85/300, AMBIENT TEMPERATURE)	6.48×10^{-12} Pa*m^3/sec	2.31×10^{-6} Pa*m^3/sec
LEAK RATE EQUIVALENTS	1 cc Helium leaked every 3000 years	1 cc Helium leaked every 24 hours
EFFECTIVE ISOLATING DISTANCE	Longer (due to ID Seal)	Shorter (due to exposed metal core)
HYDROTESTING	Yes	No (issues have been seen due to permeation)
CREEP/RELAXATION	No	No