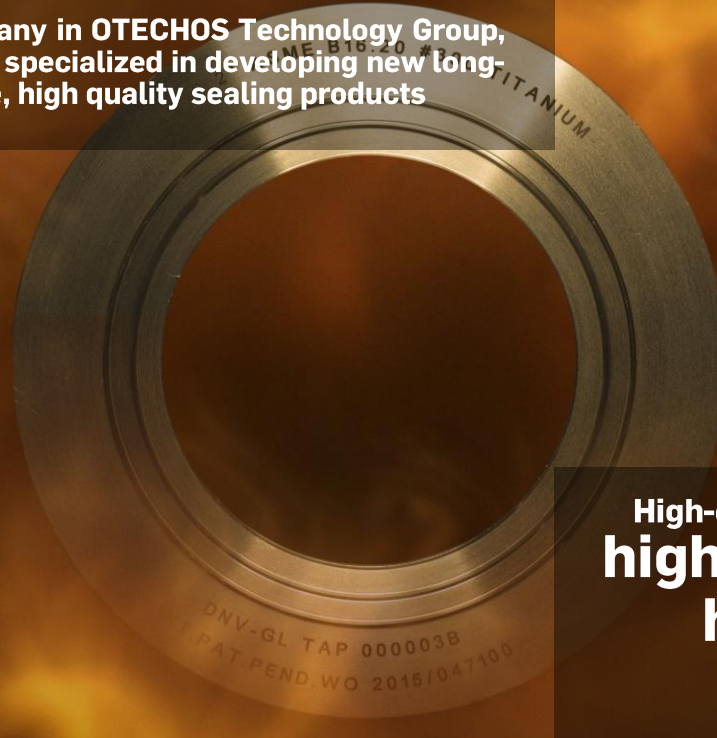


PIPEOTECH is a company in OTECHOS Technology Group, a Norwegian company specialized in developing new long-life, extremely durable, high quality sealing products



High-end sealing solutions for high temperature hydrocarbons & steam

High-end sealing solutions for high temperature, hydrocarbons & steam appliances

Sealing leakages between flanges is a well-known problem wherever hydrocarbons, high temperatures and steam are present. These problems are often also coupled with strong vibrations, highly fluctuating temperatures and corrosion, which is a challenge for all equipment and sealings. The result is that personnel are often spending more time on ad-hoc leakage problems rather than planned operations and maintenance activities.

Studies show that sealings between flanges frequently appear to be the weakest part of a pipe connection. As a result of analyses of traditional seals and gaskets, combined with experiments and extensive testing in laboratories and in working industrial equipment, the well-proven and tested PIPEOTECH DeltaV-Seal™ was developed in 2012.

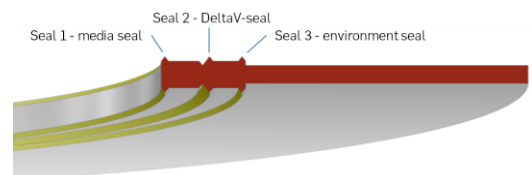
The features – DeltaV-Seal™

The design

- An all-metal, one piece sealing, in equal material or a galvanic compatible material to the flange itself
- High quality replacement for spiral wound- and kamm-profile gaskets
- Leak proof, metal to metal-sealing (TA-Luft VDI 2440 & EN 13555 approved)
- Triple protection, multiple sealing surfaces

Ideal for hydrocarbons and high temperature applications

- Approved "Fire Safe" according to API 6FB. Withstands as much heat as the flange connection itself
- High performance in temperature cycling environment
- Same material as the flanges, contracts & expands together with the flanges when temperature changes
- Same temperature range as the material of the flanges
- Stops leakages caused by quick temperature falls, avoid loss of valuable products into the environment
- Blow-out safe
- Highly mechanical stress and vibration resistant
- Avoid deterioration of flanges and subsequent leakages due to use of ductile gaskets that change sealing properties over time



Service and maintenance

- Very long life time – practically “install and forget”
- Service-free, no retightening of bolts necessary, enables longer service intervals
- Eliminate time spent on ad-hoc leakage problems - spend more time on operations & planned maintenance

Tested, approved and certified

- DNV GL type approved for use with ASME B16.5 and EN 1092-1 flanges
- Fire test approved (API 6FB), high temperature, 650°C
- TA-Luft helium test approved for low emissions (VDI 2440)
- Leakage helium test approved (EN 13555)
- Burst/leakage / vibration & pressure pulse tests approved by DNV GL

Easy to install, use and maintain

- Standard assembly procedure
- No fragmentation, easy to clean flange faces
- Eliminates harmful and time consuming cleaning of flanges
Sealing ridges deform during installation, no flange face deformation
- Avoid galvanic corrosion - select DeltaV-Seal™ in same material as the flanges
- Seals damages on flange faces (≥ 0.3 mm helium tested)
- Solid metal to metal-sealing, requires no retightening of the bolts
- Up to 80 % of leakages are due to human failure. DeltaV-Seal™ is more tolerant to user failure (tested: can seal at even 35 % of recommended torque)



Health, Safety and Environment

- DeltaV-Seal™, an important tool for reaching:
 - Zero leakage incidents
 - Zero Health, Safety and Environment incidents
 - Zero fugitive emissions – reduce global emissions (DeltaV-Seal is 10.000 times tighter than TA-Luft/VDI-2440-requirement: $1.0E^{-04}$ mbar·l(s·m). DeltaV-Seal test result: $1.01E^{-08}$ mbar·l(s·m))

Value for money

- High-end sealing solution, low operating costs
- Long lifetime – long service intervals - low lifecycle cost
- Spend more time on planned operation and maintenance instead of ad-hoc leakage repairs
- Through zero fugitive emissions, save cost of valuable products otherwise released to the environment

Dimensions, pressure classes and materials

Product	Flange standard	Sizes	Pressure classes	Materials
DeltaV-Seal™	ASME B16.5	0,5" – 24"	Up to CL 2500	Carbon steel / 304 / 316L / Duplex / Super-duplex / Titanium / 6Mo
	ASME B16.47	26" - 60"	Up to CL 900	
	EN 1092-1	DN 10 – DN 600	Up to PN 400	

Other dimensions and materials on request. Feel free to ask us about special sealing designs.

DeltaV-Seal™ - The world's first TYPE APPROVED sealing 

 DVS
DeltaV-Seal



PIPEOTECH

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