Kelvion

THERMAL SOLUTIONS

Diffusion Bonded
Heat Exchanger

Kelvion K°Bond SHX

COMPACTNESS & PERFORMANCE BONDED TOGETHER

DESIGN & FUNCTION

For decades, we have been supplying the oil & gas industry with reliable and efficient heat exchange technology for a wide range of applications. Our broad experience and knowledge of the market has enabled us to develop and enhance our product portfolio with innovations.

K°Bond, Kelvion's diffusion bonded heat exchanger, is ideal for applications involving extreme process temperatures and pressures. Combining design with welding expertise, K°Bond withstands pressures up to 1,050 bar and temperatures from cryogenic -200 to 600 °C, while providing significant savings in weight and footprint compared to common heat exchanger solutions.

K°Bond with its diffusion bonding technology is perhaps one of the most significant and game-changing solutions for projects with restricted space – May it be for offshore plants (e. g. as high pressure vaporizer) and reliquefaction on floating units.

ADVANTAGES

- **PRESSURE RESISTANCE UP TO 1050 BAR**
- **WORKING TEMPERATURE RANGE FROM -200°C TO 600°C**
- **TEMPERATURE APPROACH UP TO 2°C**
- **DIFFUSION BONDING ENSURES HIGHEST SAFETY LEVEL**
- **HIGH RESISTANCE TO CYCLIC SERVICES**
- **UP TO 6 TIMES SMALLER THAN CONVENTIONAL S&T HEAT EXCHANGER**

K°BOND APPLICATIONS

LNG

GAS COMPRESSION OFFSHORE

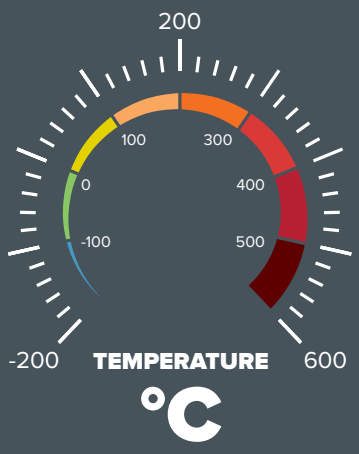
FSRU

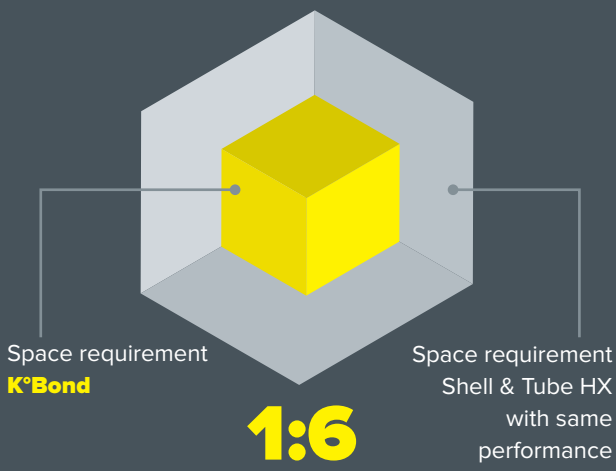
RENEWABLES

HYDROGEN

SUPERCRITICAL CO_2

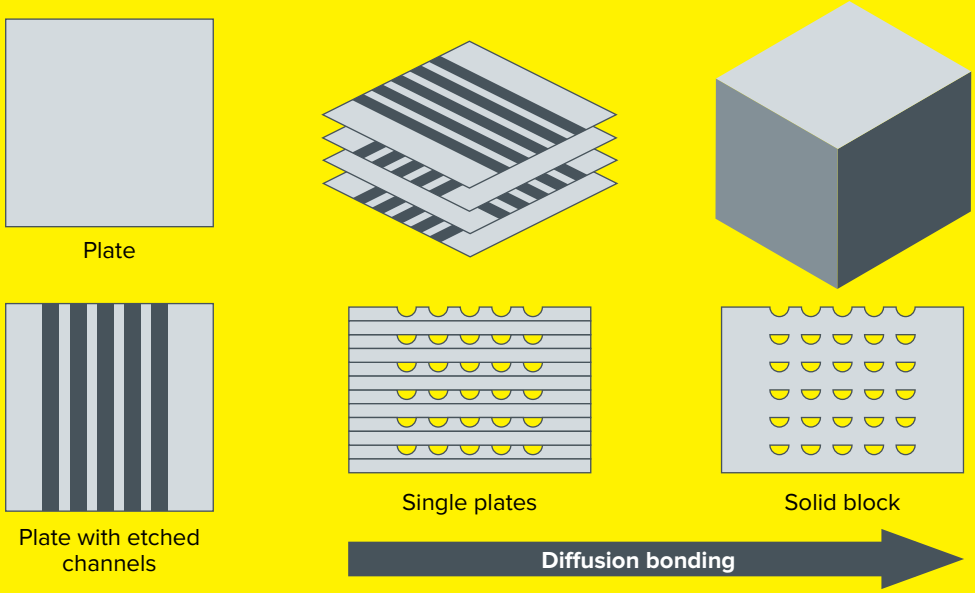
K°BOND PERFORMANCE





DIFFUSION BONDING

1. Patterns are designed for each service and chemically etched on stainless steel plates.
2. Etched plates are stacked and welded through diffusion bonding process, converting them into one solid block of metal (core).
3. When required, multiple cores are welded together. Nozzles and headers are welded on cores to form final K°Bond.



Optimized in-house design software

Available in stainless steel 304L & 316L

Designed as per ASME rules, CE-marked and / or U-stamped

www.kts.kelvion.com