



DT safety technology ensures safe and cost-efficient operation & increases process efficiency

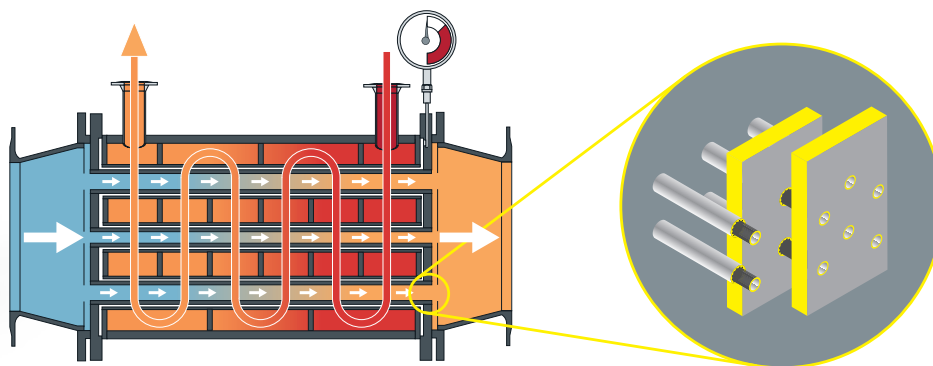
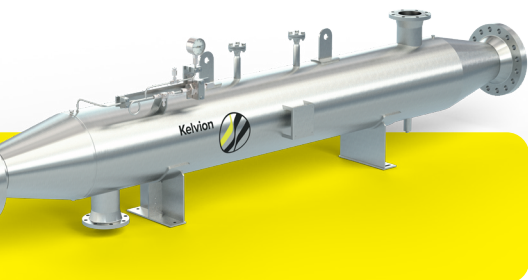
More economical and environmental compliant

Safe media separation and leak monitoring ensured

## Process Heat Transfer Solutions

# SHELL & TUBE DOUBLE SAFETY

## PRINCIPLE



## DESIGN PARAMETER



**DESIGN PRESSURE** higher pressure on request

**Shell Side**

up to 100 bar

**Tube Side**

up to 320 bar



**DESIGN TEMPERATURE**

-200 °C

550 °C

## MARKETS



Power



Chemical



Transportation



Heavy & Light Industry



Marine



Oil & Gas

## MEDIA

- ▶ Water
- ▶ Steam
- ▶ Oil
- ▶ Refrigerants and glycol
- ▶ Natural gas
- ▶ Solvents
- ▶ Chemical and toxic media

## DESIGN CODES

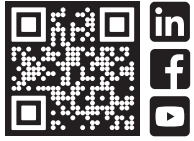
- ▶ AD 2000
- ▶ EN 13445
- ▶ ASME
- ▶ TEMA

## MATERIALS

- ▶ Carbon steel
- ▶ Stainless steel
- ▶ Copper
- ▶ Non-ferrous metals (CuNi)
- ▶ Titanium
- ▶ Hastelloy
- ▶ Super Duplex

## APPLICATIONS

- ▶ Machine Cooling
- ▶ Approval thermal oil heating/cooling
- ▶ Natural gas heating and cooling
- ▶ LNG treatment
- ▶ Chlorine liquefaction
- ▶ Ammonia evaporation
- ▶ Polysilicon treatment



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### SMART

The standardised and cost efficient solution



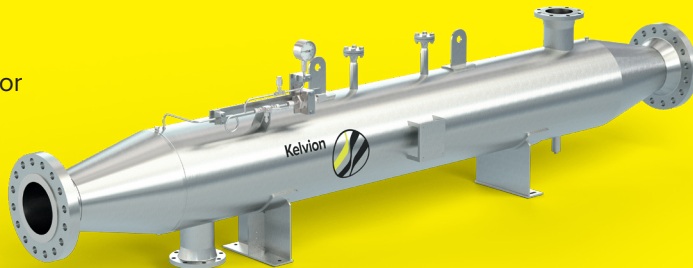
### ADVANCED

Welded shell design for demanding requirements



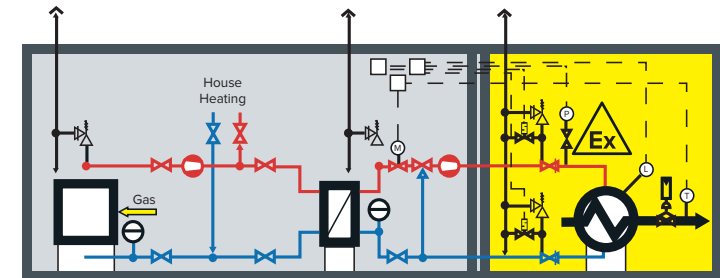
### PREMIUM

Sustainable solutions for special applications

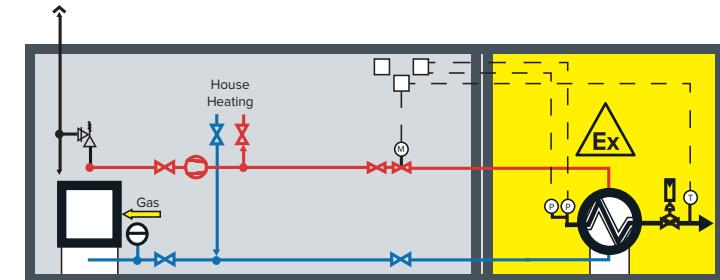


## ADVANTAGES OF SHELL & TUBE DOUBLE SAFETY

Natural gas preheating system **without** Kelvion Shell & Tube Double Safety.



Natural gas preheating system **with** Kelvion Shell & Tube Double Safety.



## REGULATIONS AND CERTIFICATIONS

- ▶ Maritime Classifications
- ▶ PED
- ▶ ASME Code Stamp (U)
- ▶ KTA - Certificate
- ▶ EAC - Certificate (TR-TS)

- ▶ SELO (China)
- ▶ CRN (Canada)
- ▶ DIN 2303 Q2
- ▶ Euro Chlor
- ▶ DVGW