

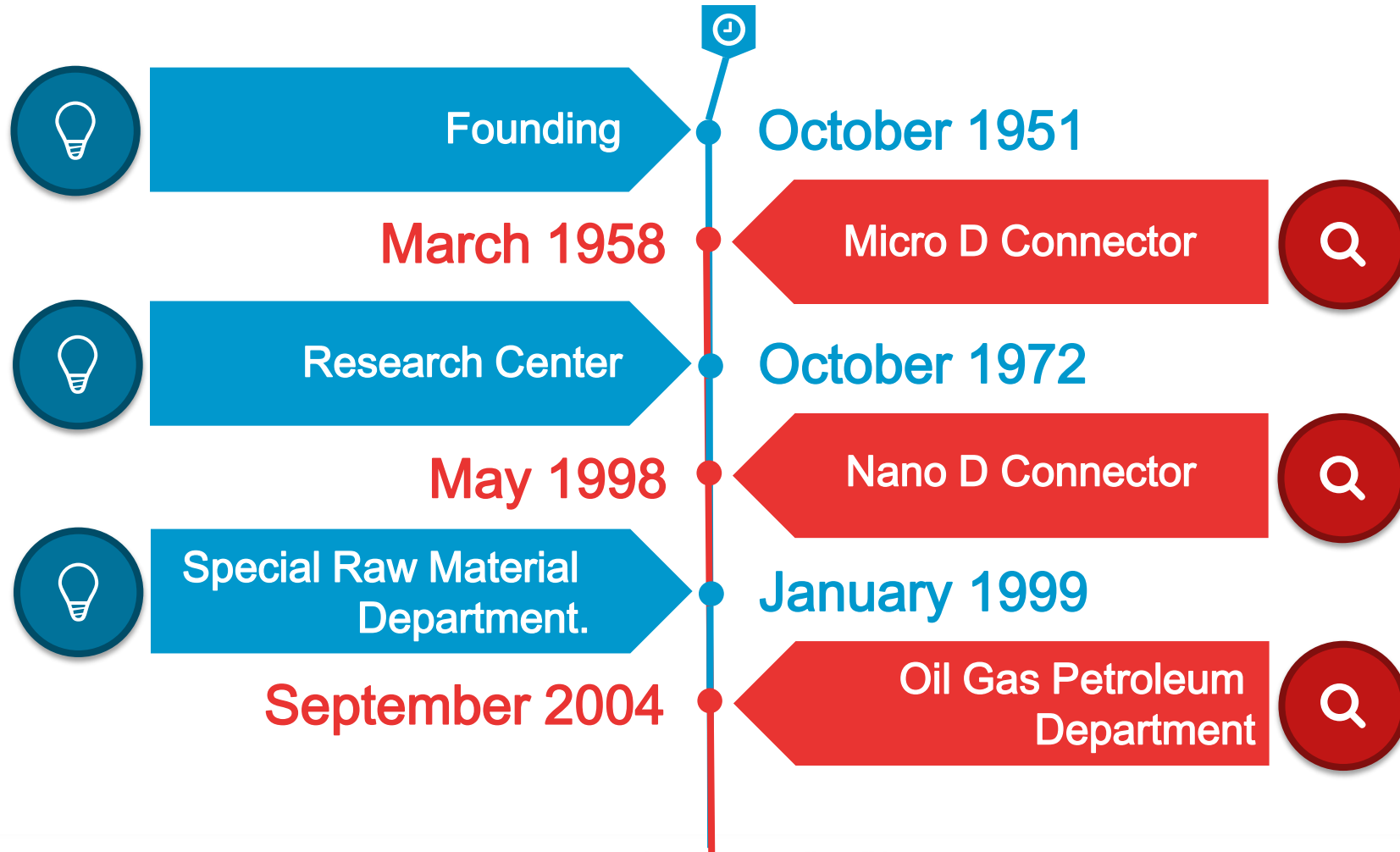


Sunkye History

Timeline



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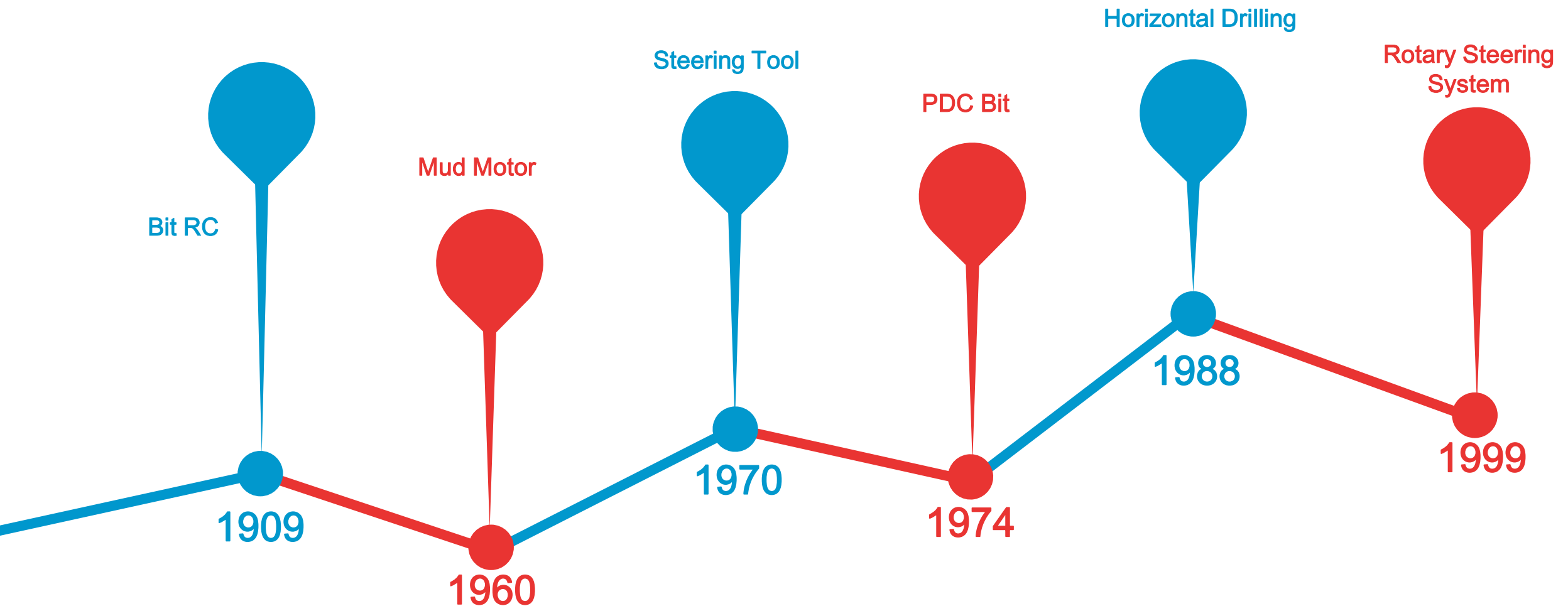




Different Generations of Drilling Equipment



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Oil Gas & Petroleum Series Products

High Performance Qualified



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PEEK Connector

High Temperature & Pressured qualified products apply for the different systems



HTHP Connector

Apply for harshness environment with various alloy



Firing Head Connector

Apply for Perforating Gun Equipment in Drilling system for Downhole and Offshore

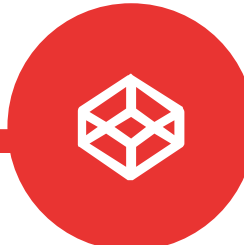
Electrical Connector

System performance for the Oil and Gas & Petroleum system



Glass Sintered Sealing Connector

Perfect Air leak Rate in the downhole and offshore solutions



Mechanical FEED THRU Terminal

Apply for different interconnectivity solutions



PEEK Connector

Performance & Features



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PEEK Material Performance

Melts at a relatively high temperature (343 °C / 649.4 °F), benefits of physical performance with Pressure in 30,000PSI /207Mpa. Air leak: helium leak test $\leq 1 \times 10^{-3} \text{ Pa.cm}^3 / \text{s}$

01

Self-Lubricating

02

Corrosion Resistance

What's PEEK

PEEK is a thermoplastic semi crystalline with excellent mechanical and chemical resistance properties that are retained to high temperatures. PEEK has a glass transition temperature of around 143 °C (289 °F) and melts around 343 °C (662 °F). That's why PEEK seals and manifolds are commonly used in fluid applications.

Mechanical Electrical

Hydrolysis resistance

04

PEEK SOLUTIONS

Currently mainly used in aerospace, automotive industry, electronics & electrical and medical machinery

03

PEEK Full Identification

Polyether ether ketone (PEEK) is a colorless organic thermoplastic polymer in the polyaryletherketone (PAEK) family, used in engineering applications.

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Materials Compare Table



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Material	Tensile Strength (Mpa)	Compressive strength (Mpa)	Elastic modulus (Gpa)	Fracture toughness (Mpa.m)
Cortical bone	50-151	100-230	7-30	2-12
Alumina	270-500	3000-5000	380-410	5-6
Bioglass	42	500	35	2
Hydroxyapatites	40-300	500-1000	80-120	0.6-1
PEEK	98-105	125-130	4-4.1	2-8
GF30-PEEK	90-157	215	6.2-8.1	0.87
CF30-PEEK	130-214	239	10-24	1.2
Stainless Steel	465-950	1000	200	55-95
Titanium	345	250-600	102.7	58-66
Ti-alloys	596-1100	450-1850	55-114	40-92

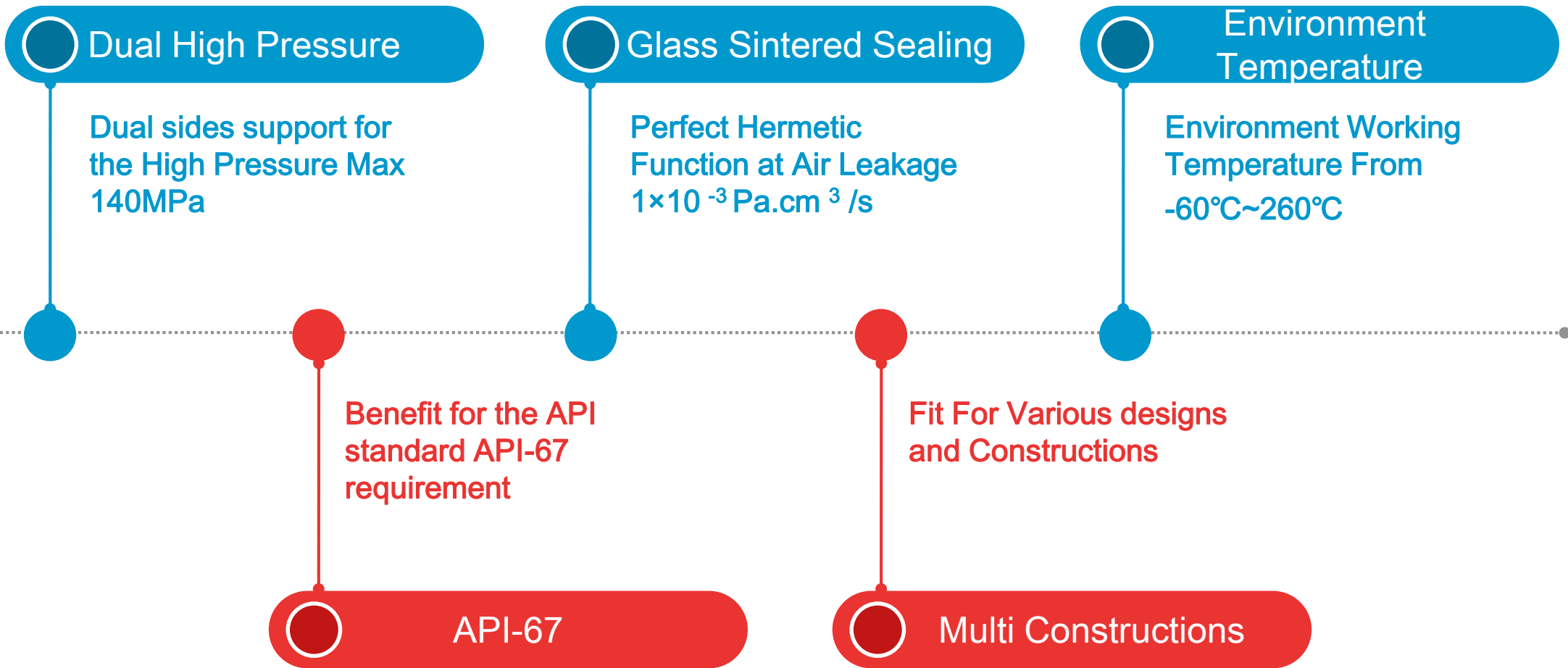


Firing Head Connector

Performance & Features



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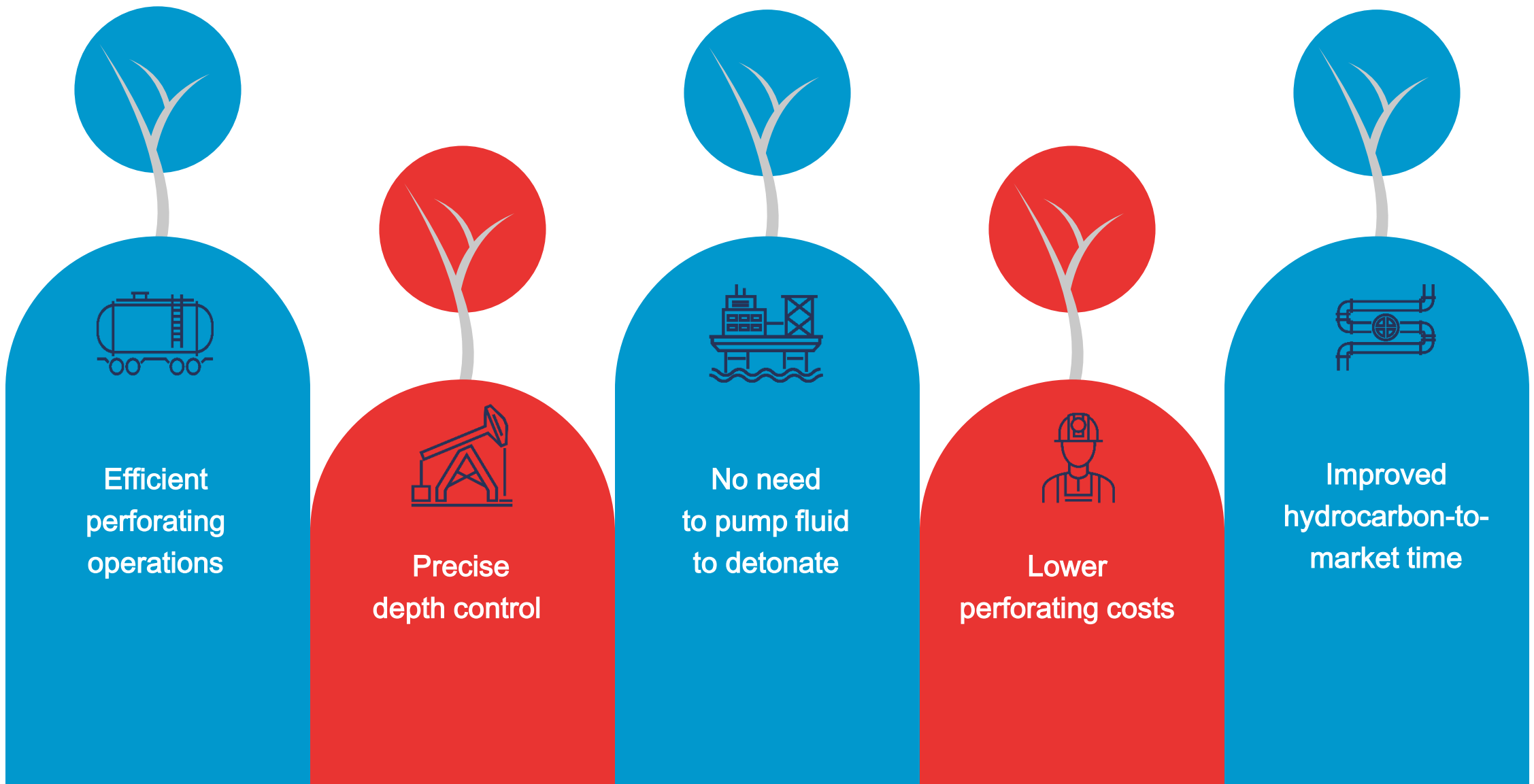


BENEFITS FOR DRILLING SOLUTION

Perforating Gun Application



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Efficient perforating operations



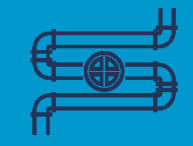
Precise depth control



No need to pump fluid to detonate



Lower perforating costs



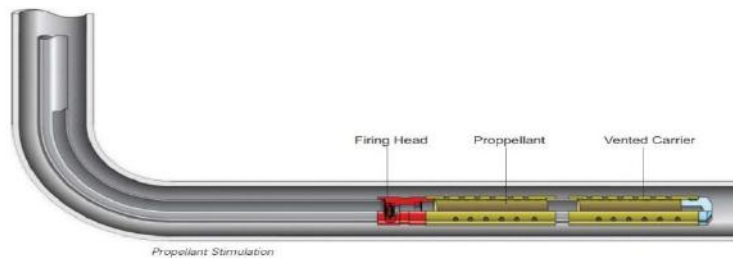
Improved hydrocarbon-to-market time



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PRESSURE FIRING HEAD CONNECTOR SPECIFICATIONS

Firing Head Connector Part Number	SK19.SYD.001	SK19.SYD.002
O.D. [mm]	28±0.01	28±0.05
Pin connector Length mm	65+0.1	41±0.05
Max. 100 Hour Temperature Rating[oC]†	200	200
Min. Required Pinning Pressure (psi)[MPa]	1,800psi/12MPa	1,800psi/12MPa
Max. Operating Pressure (psi)[MPa]‡	20,000psi/138MPa	20,000psi/138MPa
Air Leakage Rate	1x10 ⁻³ Pa.CM ³ /s	1x10 ⁻³ Pa.CM ³ /s
Shell Material	X-750	X-750
Contact Material	Alloy 52 Gold Plating	Alloy 52 Gold Plating
Rated Current per Pin	5A	5A
Dielectric Strength	≥5000MΩ	≥5000MΩ
Contact Resistance	≤10mΩ	≤10mΩ
Life Time	1000times	1000times





HHP Connector

Performance & Features



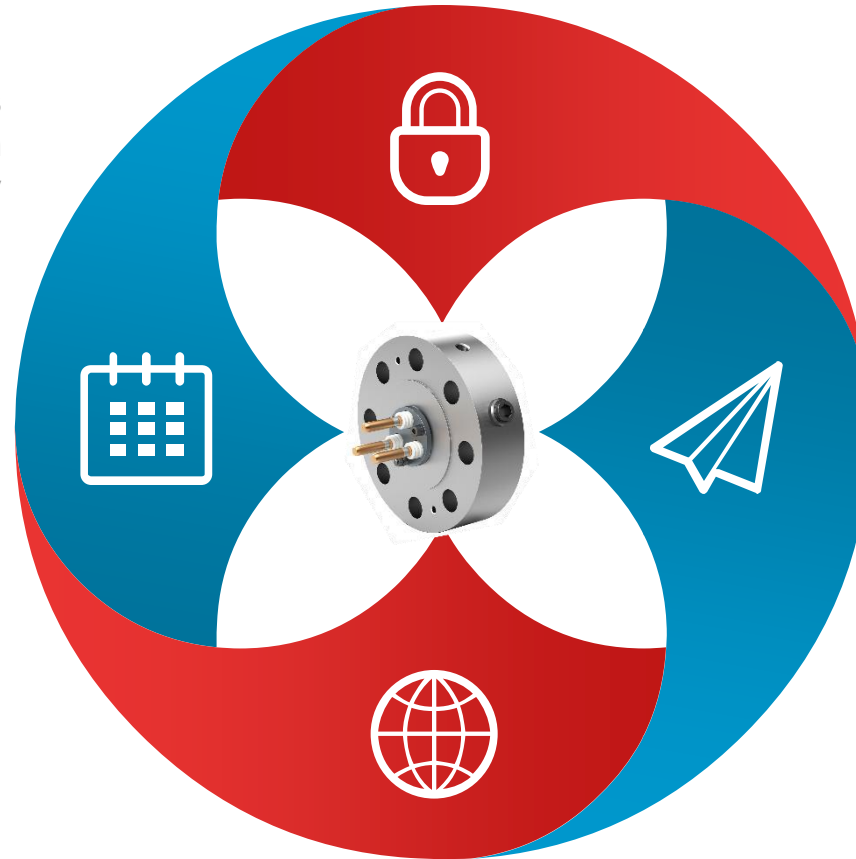
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Design Engineering

Experienced design and applications engineering staff works directly with customers from concept to delivery

Environment Requirement

for extreme pressures and temperatures and chemical compatibility and rapid gas decompression testing to meet industry standards



Sealing Performance

Comprehensive seal system designs that deliver high-performance and ease of installation

Developing Ability

Sealing system designs combine various seal geometries with specially developed HPHT materials



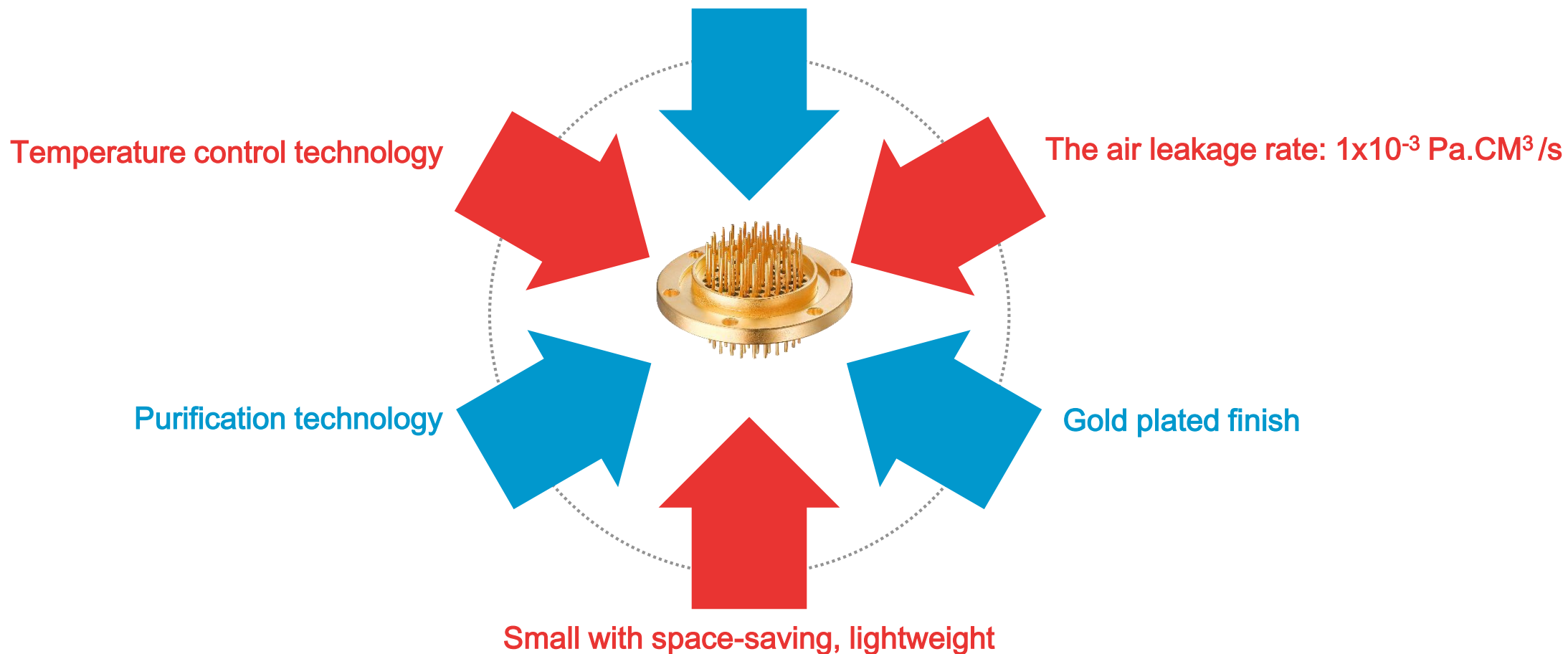
Glass Sintered Sealing Connector

Performance & Features



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Aluminum alloy glass-sintered sealing technology



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Electrical Connector

Performance & Features



**Best In Class
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Locked Connectors

Experienced design and applications engineering staff works directly with customers from concept to delivery



ESD Shielded Connectors

Electrostatic discharge can damage wiring and components. ESD shielded connectors provide additional protection against this.

Hermetically Sealed Connectors

These connectors are purpose-built to be fully functioning underwater and withstand pressure up to certain depths.



EMI / RFI Filtering

Additional features built into the housing to protect the connectors from electromagnetic interference (EMI) or radio frequency interference (RFI), which can affect circuits carrying electrical signals.

Water Resistant Connectors

These connectors are purpose-built to be fully functioning underwater and withstand pressure up to certain depths.



Moisture/Oil Resistant Connectors

These connectors are purpose-built to be fully functioning underwater and withstand pressure up to certain depths.

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Mechanical FEED THRU Terminal

Performance & Features



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Wide product range for multiple applications

01



02

Internal clamping, wire-wrap and solder contacts



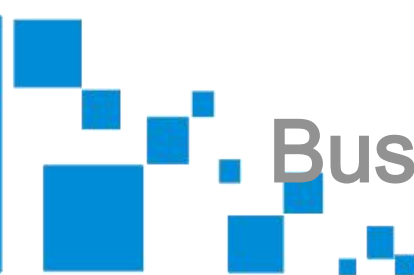
Direct ground contact to the housing

04



03

Various mounting options to meet requirements

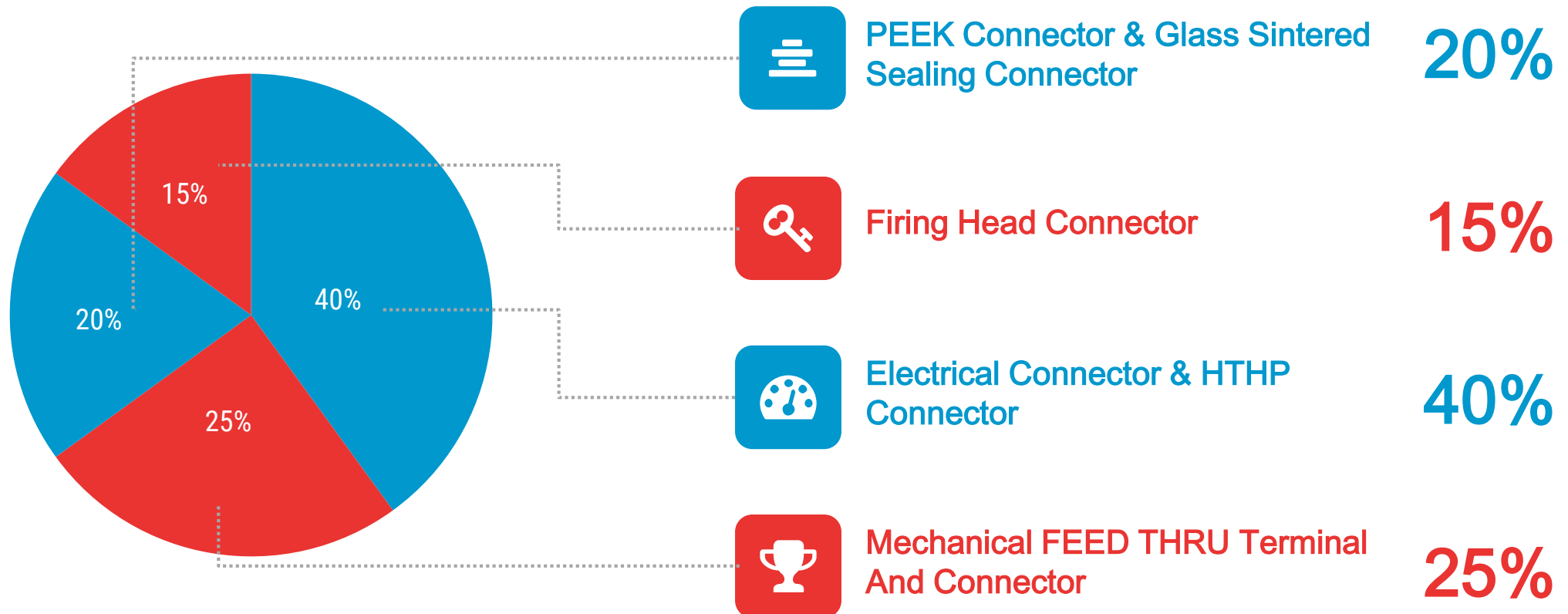


Business Occupancy

2018-2019 Year



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THANKS



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