

The HYDAC logo is a red rounded rectangle with the word "HYDAC" in white, bold, sans-serif capital letters.The word "INTERNATIONAL" is written in large, bold, red, sans-serif capital letters.The background features a globe with a blue and white grid. Overlaid on the globe are various hydraulic components, including a red manifold, several silver and white filters, and other fittings. The text "急速充電装置用冷却システムの紹介" is centered over the globe.

急速充電装置用冷却システムの紹介

2017-04-18
株式会社ハイダック



INTERNATIONAL

Components and Systems for every Application

Components and systems for fluid technology, hydraulics and electronics for an almost limitless range of applications in stationary and mobile machines as well as in fluid service





INTERNATIONAL

HYDAC in Sulzbach

1 Cooling Systems

2 Accumulators

3 Production
Large Filters

4 Mobile Systems

5 Compact
Hydraulics /
Central Machining
Facility

6 Filter Systems

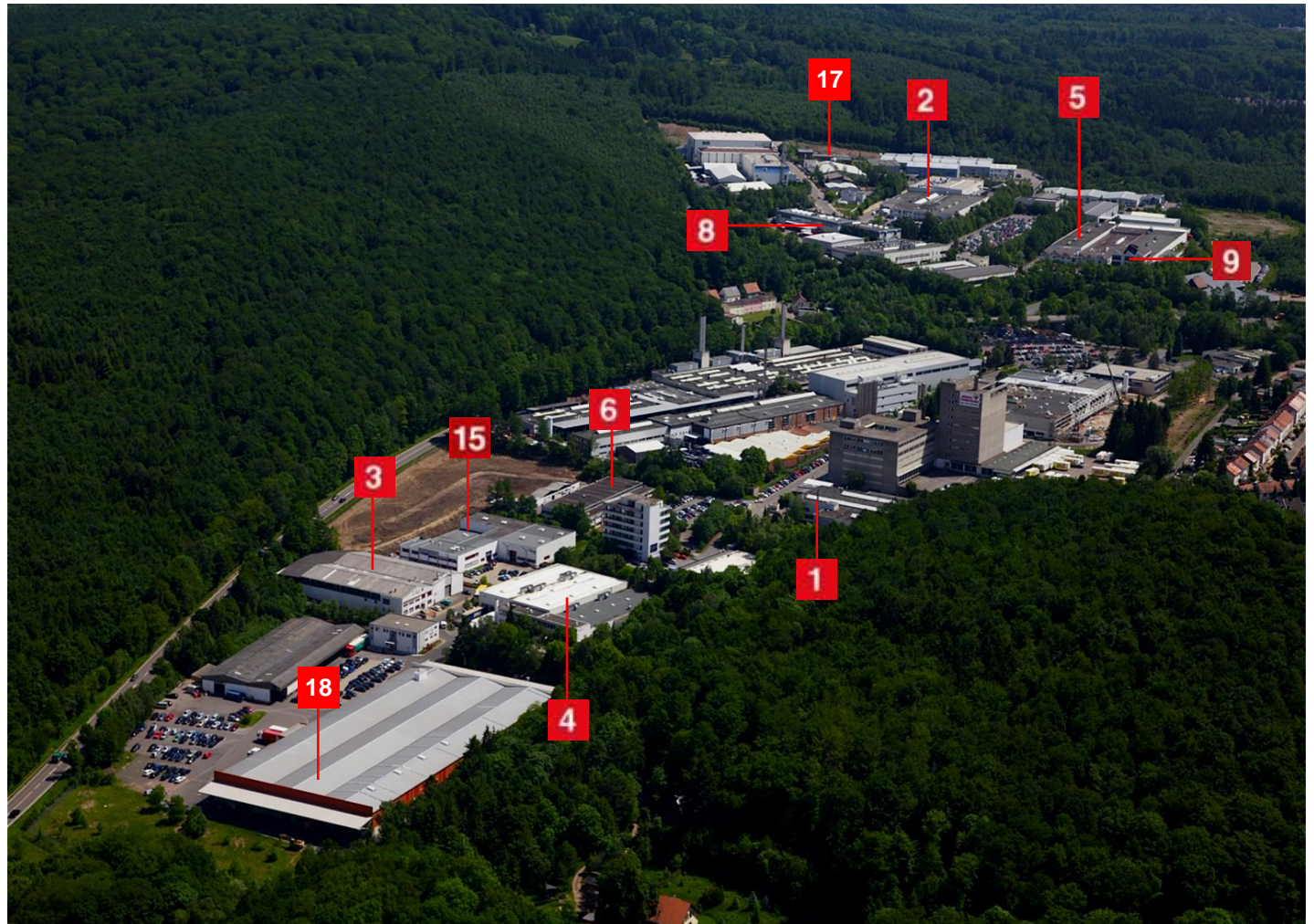
8 Hydraulic Filters

9 Administration

15 Welding Shop/
Mobile
Systems

17 FluidCare Center/
Filtration
Laboratory

18 Logistics Center/
Small power units





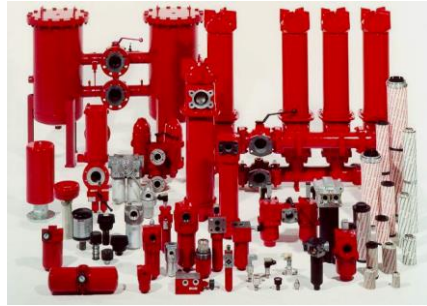
INTERNATIONAL

The HYDAC Group (founded 1963)

HYDAC TECHNOLOGY



HYDAC FILTERTECHNIK



HYDAC FILTER SYSTEMS



HYDAC PROCESS TECHNOLOGY



HYDAC ELECTRONIC



HYDAC FLUIDTECHNIK



HYDAC ACCESSORIES



HYDAC SYSTEM



HYDAC COOLING



HYDAC INTERNATIONAL



HYDAC VERWALTUNG



HYDAC SERVICE





INTERNATIONAL

Cooling Systems

**Cooling Systems -
Industrial**

**Cooling Systems -
Mobile**

**Oil/air Coolers
up to 500 KW**

**Bell Housings
with oil/air cooler**

**Plate Heat Exchangers
brazed/
gasketed**

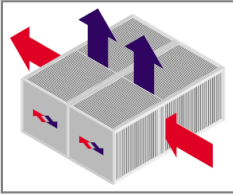
**Pump-transfer Cooler
Filtration Units**

Supply Pumps

**Motor-pump Units and
Low Pressure Filters**

**Compressor Cooler
Units**





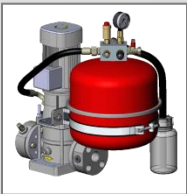
Luftkühler / *Air coolers*

- Luft-Luft / *Air-Air*
- Wasser-Luft / *Water-Air*
- Öl-Luft / *Oil-Air*



Wasser-Kühler / *Water coolers*

- Wasser-Wasser / *Water-Water*
- Öl-Wasser / *Oil-Water*



Flüssigkeits-Kühlsysteme *Fluid Cooling Systems*

- geschlossene Kreisläufe / *closed circuits*
- offene Kreisläufe / *open circuits*



Kühlaggregate / *Chillers*



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INTERNATIONAL

Flüssigkeits-Kühlsysteme
Fluid Cooling Systems

FLKS

mit Kunststoff-Tankgehäuse
with plastic tank housing

- ✓ compact
- ✓ light-weight
- ✓ low-noise
- ✓ efficient



FLKS-1H



FLKS-1H+



FLKS-2



FLKS-4

The HYDAC logo is displayed in white text on a red background, positioned in the top left corner of the slide.

INTERNATIONAL

Flüssigkeits-Kühlsysteme
Fluid Cooling Systems

FWKS



mit Wasserregelventil
Festwert-Regelung: $\pm 3K$
with water control valve
fixed set point control $\pm 3K$



mit PID-Regler
Festwert oder Differenz-Temperatur
Regel-Genauigkeit: $\pm 0,5 K$
with PID controller
fixed set point and difference temp.
Control accuracy: $\pm 0.5 K$



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INTERNATIONAL

Applications

Windenergieanlagen / Wind Turbines



Condition Monitoring
Condition Monitoring



Filtration
Filtration



Bremsaggregat
Brake Power Unit



Hauptlagerschmier.
Main Bearing Lubr.



Bremsfunktionen
Brake Functions



Accessories
Accessories



Pitch Control
Pitch Control



Partikel-Messgerät
Particle Counter

Condition monitoring of oil cleanliness and oil aging
Measuring technology and electronics
Cooling and filter systems
Hydraulic systems and components
Pitch control



Filterumpumpeinheit
Filter Pump
Transfer Unit



Messtechnik
Measuring Technology



Getriebekühlung
Transmission Cooling



Kühl- und Filtersysteme
Cooling and Filter Systems



Filterelemente
Filter Elements



Hydraulik-Zylinder
Hydraulic Cylinders



In-Plant Technology
In-Plant Technology

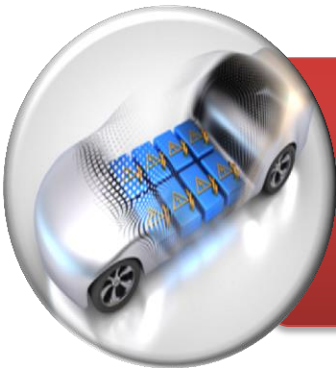
Neue Märkte: E-Mobilität New Markets: E-



Neue Märkte: E-Mobilität *New Markets: E-mobility*



Ladeinfrastruktur
Charging infrastructure



Energiespeicher / Antriebe
Batteries / Drives

Neue Märkte: E-Mobilität *New Markets: E-mobility*



Ladeinfrastruktur *Charging infrastructure*

- **Schnell-Ladestationen
(250–500A Ladeströme)**

Kühlung von

- Gleichrichtern
- Kabel / Stecker

- **Wasserstoff-Tankstellen**

Kühlung von

- Komprimiertem Wasserstoff
- Umrichtern

- ***Fast Charging stations
(250–500A charging capacity)***

Cooling of

- *Inverters*
- *Cables / Connectors*

- ***Hydrogen stations***

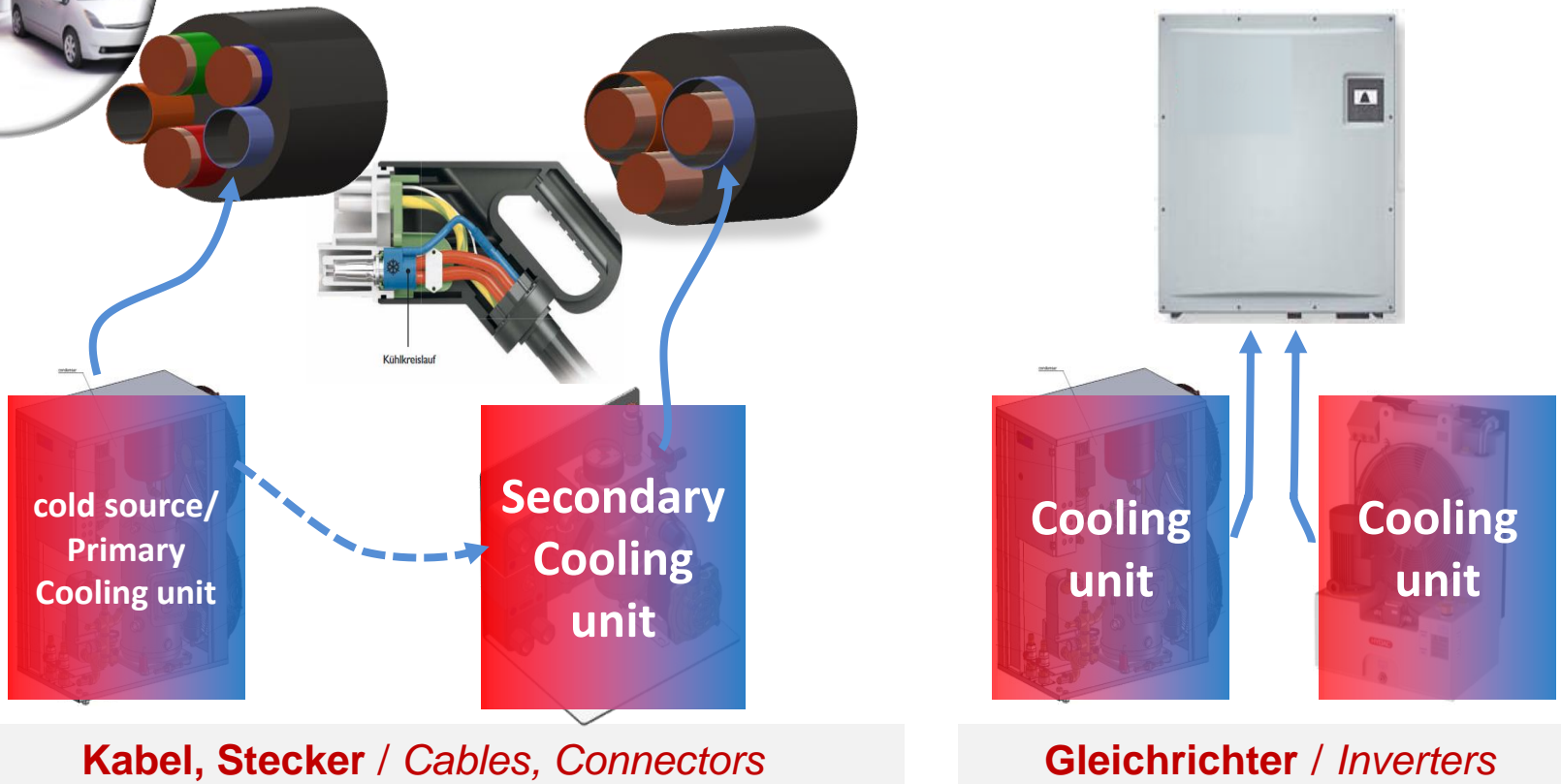
Cooling of

- *Compressed hydrogen*
- *Converters*

Neue Märkte: E-Mobilität New Markets: E-mobility



Ladeinfrastruktur Charging infrastructure



Kabel, Stecker / Cables, Connectors

Gleichrichter / Inverters

Beispiel E-Ladestation Example E-Charging Station



E-Ladestation E-Charging Station

■ E-Ladestationen:

Kühlungsaufgabe

- Umrichter / Trafo → *Bekannte Thematik*
- Kabel / Stecker
→ Neue Thematik → **neue Produkte**

■ E-Charging Stations:

Cooling tasks

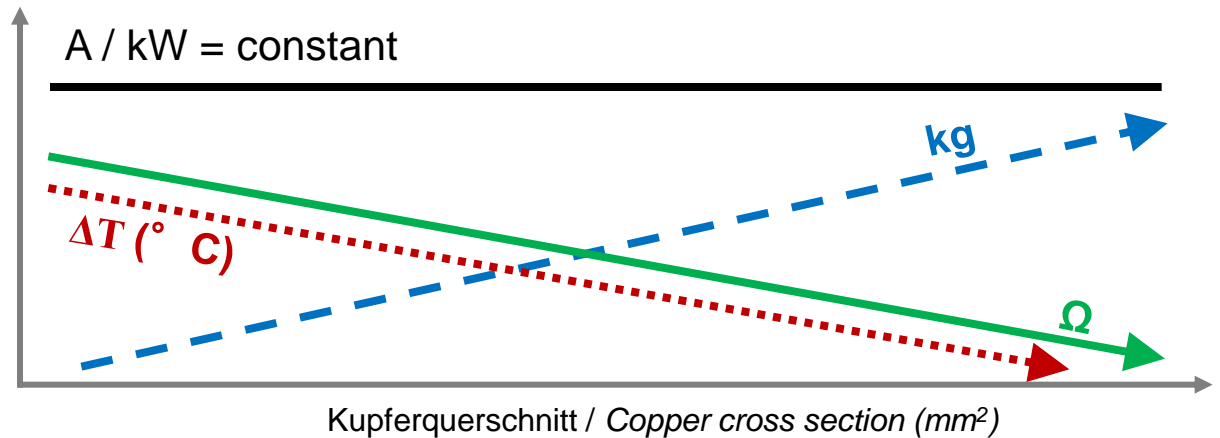
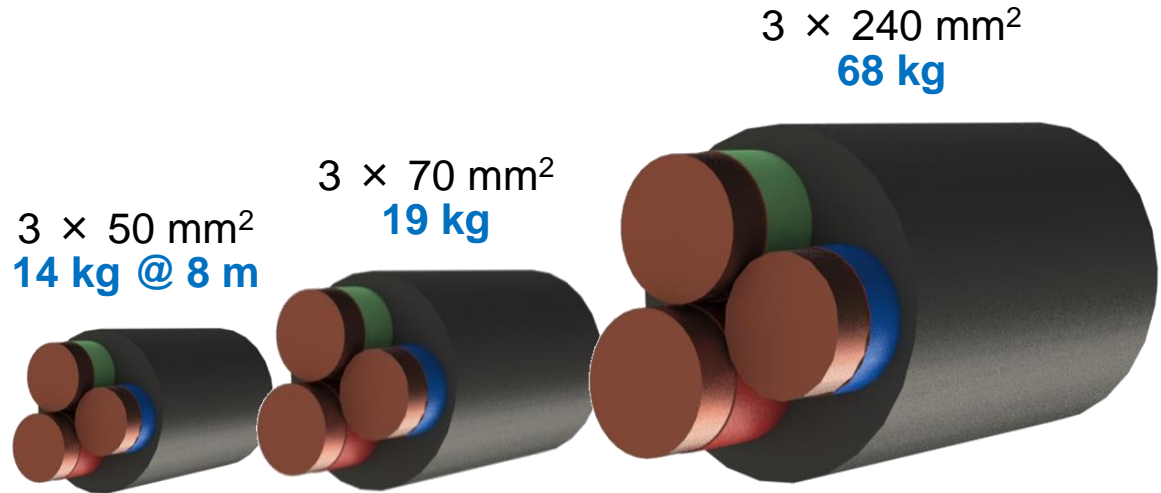
- Inverters / transformers → *known topics*
- Cables / Connectors
→ *new topics* → **new products**



Beispiel E-Ladestation Example E-Charging Station



$$\Delta T \propto R_{Loss}$$



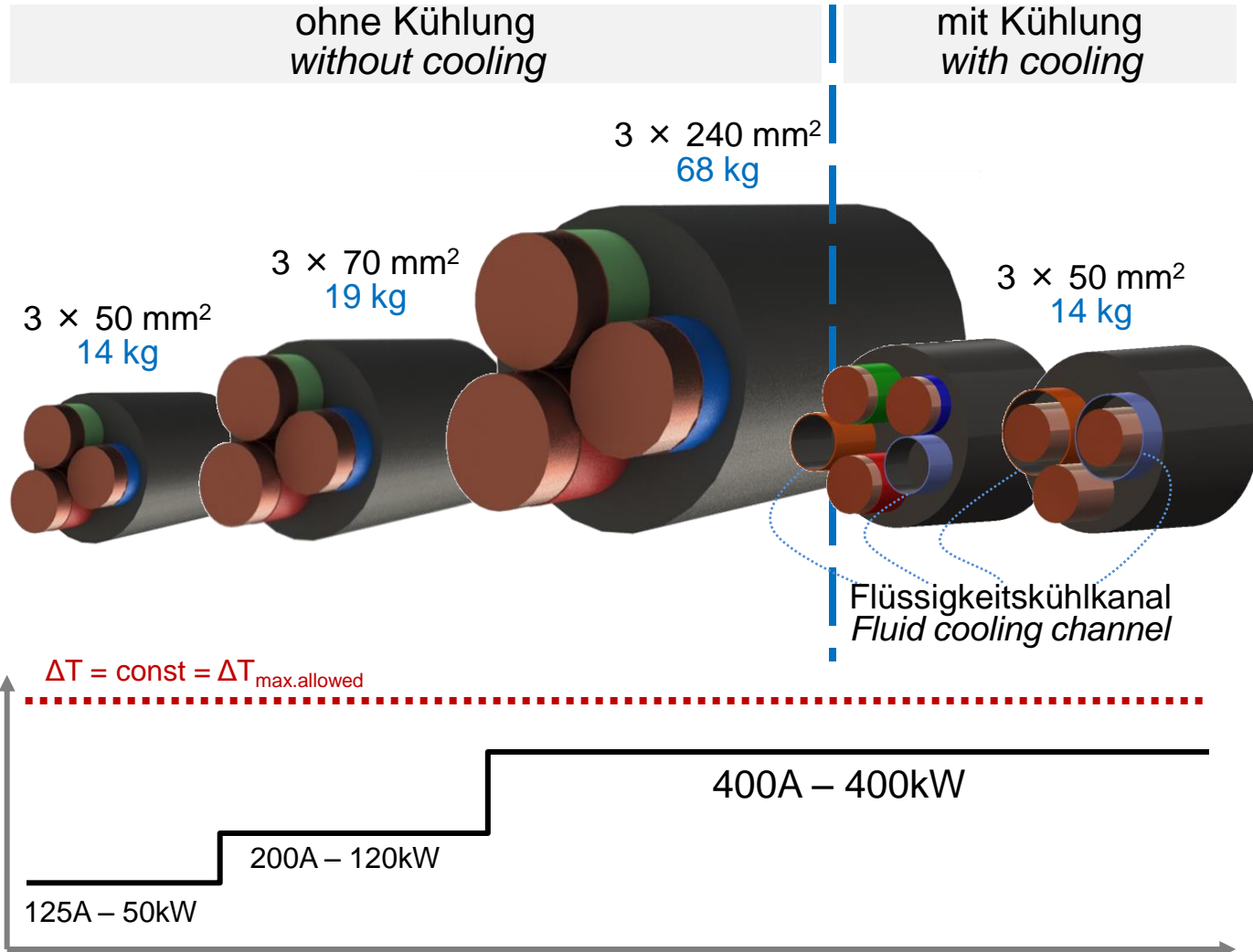
Beispiel E-Ladestation Example E-Charging Station



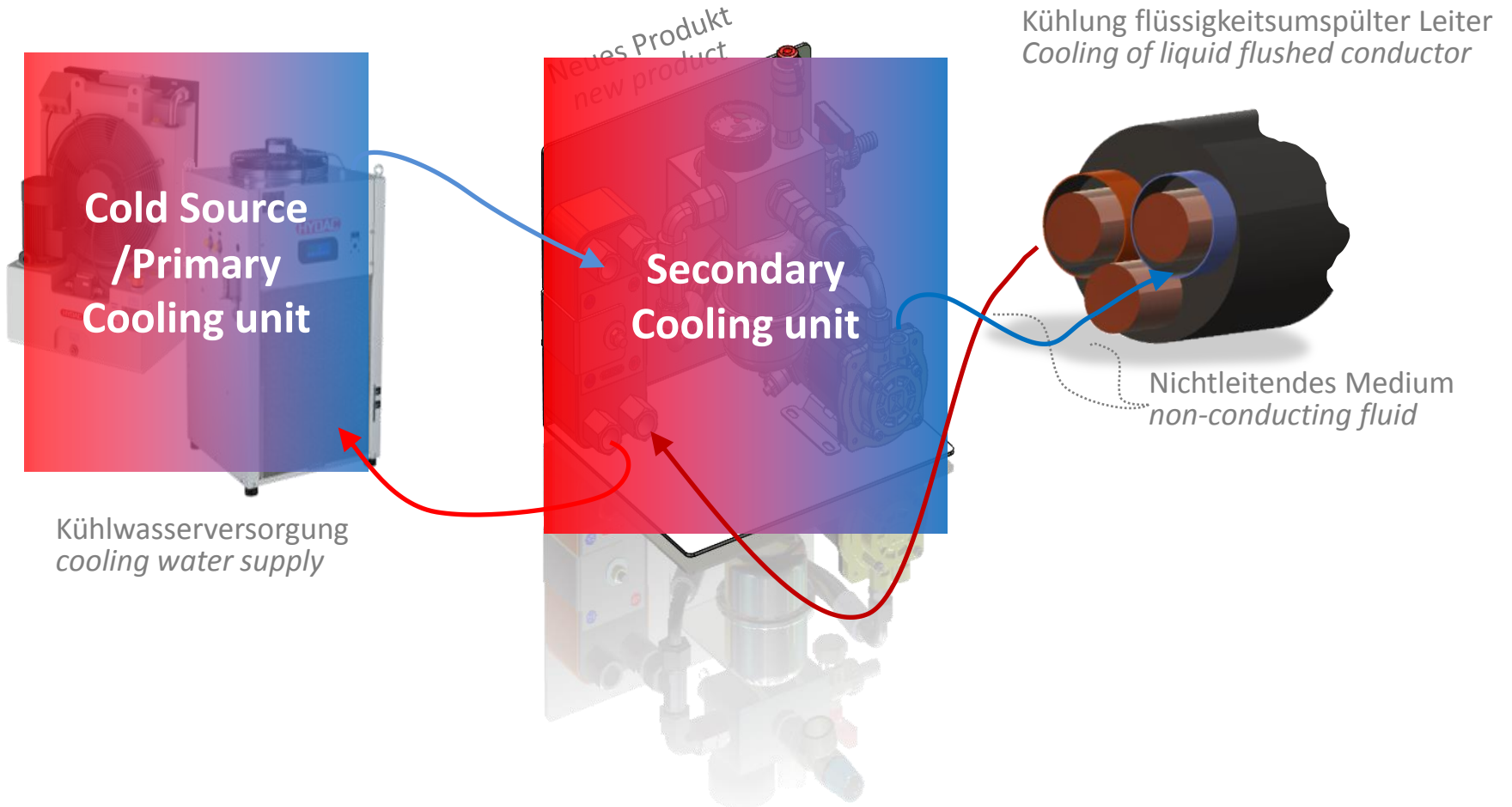
Steckerkontakte
Plug contacts



Ladekabel
Charging cable



Beispiel E-Ladestation *Example E-Charging Station*





HYDAC

INTERNATIONAL

Produktübersicht
Product overview



HYDAC INTERNATIONAL

ご清聴ありがとうございました



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