THE FUTURE OF CLOUD COMPUTING

The need for faster information processing is growing at an exponential pace. **More data means more power. More power means more heat.** With immersion cooling, a method of submerging computer components in a liquid coolant, we can manage heat faster while being more efficient, safe and sustainable.

INDUSTRIES OF THE FUTURE

5G Edge Computing
THE FUTURE OF COMPUTING

Edge computing centers are often located in urban areas, where space is more expensive and less available

High Frequency Trading
THE FUTURE OF TRADING

High frequency trading requires high-performing systems that rely on timeliness and response speed

Blockchain and Crypto
THE FUTURE OF FINANCE

Blockchain technology requires a large number of machines connected to a network with frequent mathematical calculations

Each of these future industries will require one major component: **DATA CENTERS**. These growing industries will require data centers with higher speeds, increased efficiency and an abundance of resources. And it's critical we accelerate with sustainability in mind.

HERE'S WHY:

30%
increase in data center energy since 2010 as a result of the increase in need for data centers

40%
of the energy use from data centers comes from the cooling needed

1 billion
liters of water are used by data centers per day in the U.S. alone

1.5%
of the world's electricity consumption is accounted for by data centers

AI and Machine Learning
THE FUTURE OF LEARNING

Training algorithms for AI applications use a large number of GPUs, which creates a high level of heat and requires a lot of electricity to cool

MOVING INDUSTRIES FORWARD

To ensure these critical cloud and data centers are more efficient and sustainable — and to reduce their tremendous energy and land consumption — we've created a revolutionary new single-phase cooling method enabled by silicone chemistries: DOWSIL™ Immersion Cooling Technology.

DOWSIL™ IMMERSION COOLING TECHNOLOGY ENABLES:

SUSTAINABILITY FOR A CARBON NEUTRAL FUTURE

- A **low-carbon solution** featuring low Global Warming Potential (GWP) and zero Ozone Depletion Potential (ODP) to reduce environmental impact
- Water consumption in immersion cooling amounts to **less than 1%** of the total water used in traditional cooling methods
- Immersion cooling can reduce a data center's energy usage by **over 60%**

OPTIMIZED COOLING

- Delivers optimal cooling and thermal conductivity with **low dielectric constant** (ranging from 2.1 to 2.2) and **low viscosity** (10/30 cSt at 4C) with multiple selections
- Silicone liquid is **superior in heat conduction** versus air

HIGH COST EFFICIENCY

- **Reduction** of noise, costs and leakage risks
- Easy to maintain in a **convenient location** that saves space
- **Does not require** chillers, CRACs, CRAHs or raised floorst

STABILITY FOR AN ACCELERATED OUTLOOK OF DATA CENTERS

- **Built on** stable chemical properties, high material compatibility and low water absorption
- Liquid can get into **small spaces and closer** to materials that need cooling

Learn more about immersion cooling at **bit.ly/DowImmersionCooling**

DOW®

Seek Together™