



Closed rack mountable immersion cooling



The future of server cooling

Rack mountable immersion cooling

The Hypotherm Rack Mount (HRM)

Introducing



The world's first modular rack-mountable chassis for multiple immersion cooling cassettes.

The HRM offers immersion cooling as a flexible rack-mountable solution for existing data center environments.

It achieves a remarkable Power Usage Effectiveness (PUE) of less than 1.04, helping reduce data center power needs, cutting energy costs, and minimizing the carbon footprint.

The chassis ensures a stable, compact, and future-proof power density of 4kW per cassette.

Experience 100% heat capture for optimal efficiency!



Multiple cassettes



Closed intelligent cassette making life easy

- Electronics and liquid contained within cassettes
- Sealed cassette prevents liquid spills
- Guarantees optimal cooling performance
- Easy access to components
- Completely silent





The cassettes are accessible from the front side for service or replacement

The duty engineer has two options for maintenance:

1

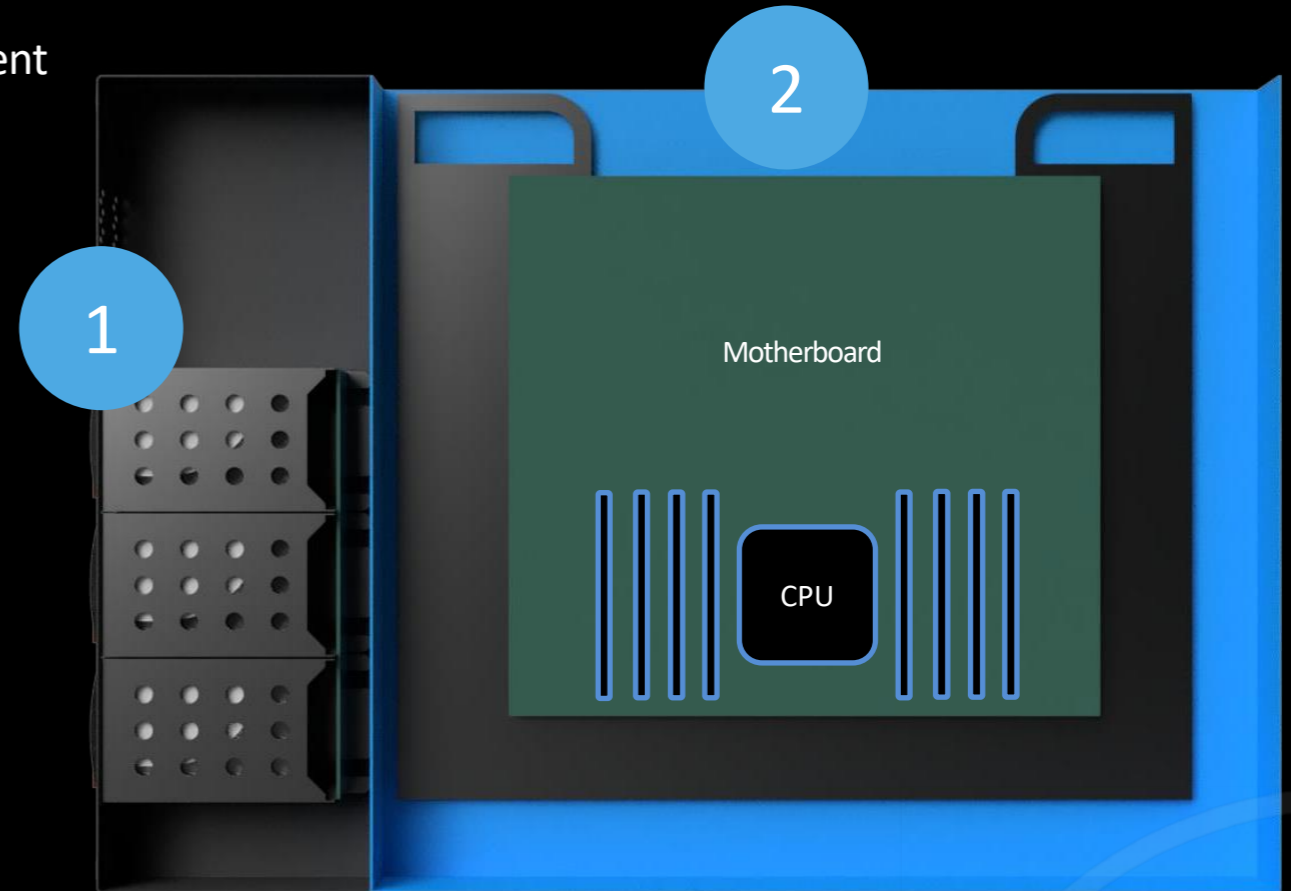
I/O service only

The frontside provides (hot)swappable access to drives and OCPv3 compatible network interface cards and network cables while the system is operational.

2

Full cassette for maintenance

Engineers can choose to quickly remove the entire cassette, filled with liquid and equipment to the designated maintenance area to perform maintenance on the internal PCB (mainboard/CPU/GPU/memory).



Cassette side view / cutout

Technology vendors



Support a broad range of systems

Server (E)ATX motherboard like:

- Supermicro
- Gigabyte
- Tyan
- ASUS
- Intel



Natural convection



You just need the existing data center facility cooling water

Natural convection takes care of the rest

No fans

No pumps

No in-rack cooling distribution unit

No air cooling

The most efficient and silent server cooling solution available



Key features



Dripless couplings cassettes



**4kW heat exchanger
Natural flow**



**Compute frame attached
to lit**



**IP66 smart cable
management system**



Frontside connections



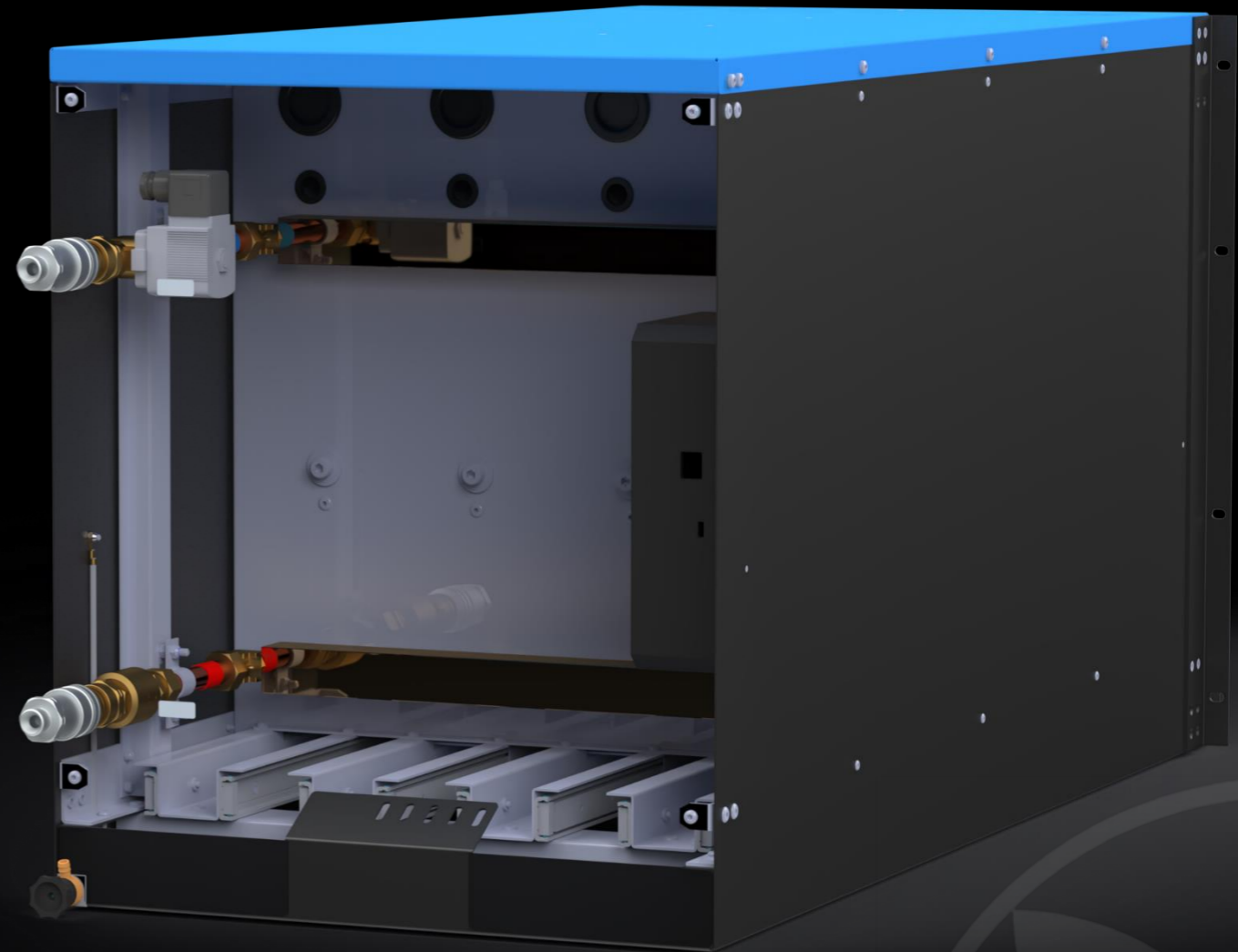
**Dripless couplings for
link data center**



Specifications



Cooling capacity*	4kW per cassette 16kW total
Number of immersion cooling cassettes in chassis	4
Weight (incl. liquid)	~170kg /375 lbs
Dimensions	Width 19" (482.6mm) Height 12RU (528.6mm)
Density	Up to 3 chassis per data center rack Up to 12 cassettes per data center rack Up to 48kW per data center rack
Cooling grid requirements	Industry standard Quick Connect Couplers Danfoss Hansen Aluminum Flat Face A3DB 10L/min (2.5 lpm per cassette)



* Heat exchanger has cooling capacity of 4kW

Efficiency



Mechanical PUE*	<1.04
Power and carbon footprint reduction	20% - 40% reduction by removing fans from servers Up to 90% more efficient data center cooling 50% – 60% total power reduction
Temperature inlet	Up to 40°C/ 104°F
Temperature outlet	Up to 60°C/ 140°F
Water usage reduction	99%
Cost reduction for data center construction	70%



LET'S COOL THE PLANET

