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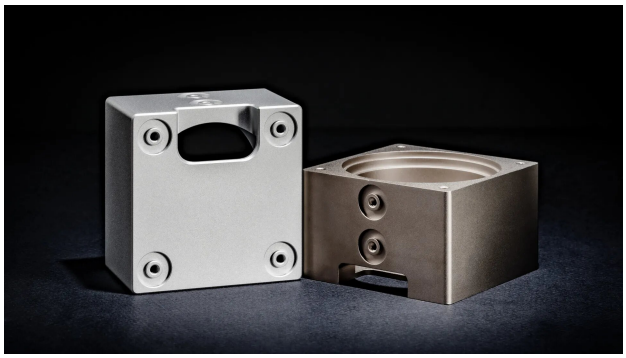
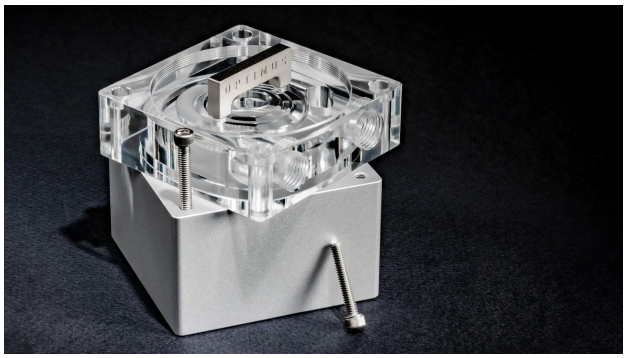
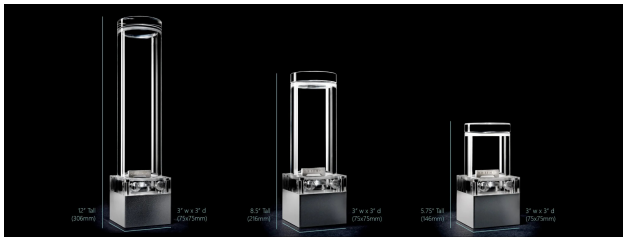
Optimus Absolute Reservoir System - Acrylic - 12" - D5 Included - Silver

$339.00

Product Images







Short Description

The Optimus D5 Reservoir system is the new benchmark for PC liquid cooling reservoirs. Using only ultra strong cast acrylic, extra-thick reservoir walls, CNC polishing, unibody heat sinks and zero acrylic screw threads, the Optimus D5 Reservoir is the highest quality and most reliable D5 pump/res combo on the market.

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Features

THE RESERVOIR REINVENTED
When designing the Optimus D5 reservoir system, we started with a clean sheet of paper. Our goal was to create the most reliable, high performance pump/res system on the market. By using only cast acrylic and ultra-precision CNC methods, we succeeded in banishing the potential for acrylic cracks. And with the heat-wicking D5 heat sink and monolithic aluminum mounting system, the Optimus reservoir not only performs amazingly well, but is extremely compact, at only 3" (75mm) square. And that's with the biggest and thickest reservoir tube (2.75", 70mm) on the market.

THE THICKEST ACRYLIC RESERVOIR AVAILABLE
With 2.75” (70mm) outside diameter, 2.5” (63mm) inner diameter and ¼” (6.4mm) wall thickness, the Optimus reservoir is the thickest reservoir tube on the market.Most reservoirs are 60mm diameter with wall thickness 5mm or less. Not only does the thicker reservoir looks great, but it eliminates the issues of thin wall extruded reservoirs that are prone to cracking.

ELIMINATING CRACKED ACRYLIC RESERVOIRS
Optimus uses only cast acrylic tubes from premium name-brand suppliers like Plexiglas® by Arkema and Polycast™ by Spartech. Cast acrylic tubing is one of the most difficult types of acrylic to make, but the quality is second to none.

The benefits of cast aren't small: extremely fracture resistant, highly stain resistant and excellent optical clarity.In fact, our cast acrylic is much stronger than acetal and nearly impossible to break. Feel free to allen wrench your fittings in place, our block won't blink.

CAST VS EXTRUDED ACRYLIC TUBE
Unlike cast, extruded acrylic tubing can be extremely cheap to purchase and it's easy to manufacture. That’s why extruded is used by nearly every watercooling company.But extruded acrylic isn't suited for liquid cooling parts. Extruded is prone to stress and spider web fractures from machining and expanding/contracting during temp fluctuations.

CAST VS INJECTION MOLDED NYLON TUBE
Like extruded acrylic, injection molded nylon feature similar downsides, including a +/- 10% expansion variation and high fluid retention, all sources of stress. Injection molding requires self-tapping screws, rather than CNCed threads, meaning the accuracy and service life of nylon is very low.

CAST VS BOROSILICATE GLASS TUBE
Borosilicate glass, while it looks great, has its own challenges. Glass can't be machined, thus requiring additional support to create the seal, opening a new host of potential leak issues. While borosilicate glass is much cheaper than cast acrylic, cast offers incredible durability and reliability while matching the clarity of

glass.

DIAMOND VS FLAME POLISHED

Optimus uses only custom designed diamond CNC bits to achieve high optical quality while eliminating stress and chemical fractures, rather than buffing or flame polishing.

Flame polishing causes numerous problems. First, flaming (and vapor) polishing works by melting the outer layer of material to achieve a glass-like appearance. While the results look great, melting causes significant damage to the acrylic structure and makes the acrylic highly prone to stress cracking as well as spider webbing from fluids and temp fluctuations. Isopropyl alcohol will instantly destroy a flamed reservoir and not a CNC cast reservoir. Moreover, flamed acrylic has a tendency to turn yellow over time.

Additionally, by diamond polishing, we're able to achieve higher clarity in places flaming cannot, like the inside of ports and channels. While this is a far more time consuming and challenging process, we believe the results speak for themselves.

100% CNC MILLED ports AND RESERVOIRS

A small but critical detail is we only CNC our G1/4" ports, never thread tap. Thread tapping is the industry standard because it's easy and any budget drill press can do it. Thread tapping works by twisting a threaded drill bit into the material, causing burrs and extreme levels of stress. The resulting thread tapping micro fractures are nearly invisible, until the acrylic meets water, heat and pressure. Then micro turns into macro and cracks appear.

With CNCing (aka thread milling), specialized CNC bits are used to sculpt away the material and make the threads. CNC milling is vastly more accurate and causes far less pressure on the material, but takes much more time and requires high-speed CNC machines. For Optimus, CNC threads are a must.

Ultimately, all these steps combined make our acrylic reservoirs nearly indestructible.

TEMPERATURE REDUCING D5 PUMP HEAT SINK

Our CNC aluminum d5 housing does double duty as a large heat sink to dissipate heat from the D5 pump. Now, you probably know that D5 pumps are cooled by the liquid in the impeller. This means the pump heat enters the liquid loop. And since D5s can pull up to 30 watts, the heat generated is not trivial.

With the Optimus heat sink, additional heat is pulled from the D5 and wicked into the air, not the liquid, reducing reservoir temps by a noticeable amounts.Overall, the Optimus system is multiple degrees cooler than any other pump/res combo on the market.

BRACKET-FREE MOUNTING

The heat sink also acts as a massive monolithic case mounting assembly. Typically, pumps are mounted to cases with stamped metal brackets or rubber tire-style pump holders. By including the mounting in the metal base, not only is the mounting incredibly strong, but you can achieve a completely screw-free look in your PC builds.

The bottom brackets are perfect for many cases with pump adapters like the popular Lian Li PC-O11 cases. The back mounting holes are designed for cases with slots like NZXT and others. While there are no pump mounting standards in PCs, these patterns should give you plenty of options.

ONLY METAL-TO-METAL ASSEMBLY

The Optimus reservoir is assembled with stainless steel screws into only 6061-T6 metal threads, never acrylic or acetal threads. Plastic threads strip, crack and leak.Combined with weaker extruded acrylic and poorly thread-milled threads, cracks are all too common. While plastic threading is more affordable and the #1 pump style on the market, the life of an acrylic reservoir is very low.

Additionally, the monolithic pump housing provides a better D5 pump seal than acrylic threads or large screw-style D5 mounts. Both styles use plastic-to-metal that makes cross-threading (and thus stripping) far too easy. By using a metal-to-metal design, not only is the seal stronger, but the Optimus system is extremely crack resistant and can be disassembled and reassembled many times without the fear of stripping threads.

MACHINED VORTEX BREAKER

The vortex breaker deserves an upgrade. The breaker (aka anti-cyclone) prevents a whirlpool effect in your reservoir that can suck air bubbles into your loop. Rather than plastic or sponge breakers, the full metal breaker won't snap, disintegrate or catch air bubbles. The vortex breaker is machined C110 copper and Optimus-made brass screws, both with Pro-XE nickel plating. The breaker is blank on one side and can be reversed if you want that zero branding look.

SYMMETRICAL PORTS

The Optimus reservoir pump top feature symmetrical in and out ports, unlike most D5 reservoirs. Symmetrical ports allow cleaner looks for premium builds. Through extensive testing, we were able to create a spiral channel inside the pump top to make the D5 flow rate extremely high and efficient.

Additionally, the pump top can be rotated in any direction. So the bottom heatsink can be mounted to the back while the ports can face in the direction you need.

CLEANEST CABLE ROUTING

The pump heat sink is designed for super clean cable routing. When mounted directly on the back wall of the chassis, the pump cables can go directly into the back cabling area for a true zero cable look. For cases with pump mounts, the cables can be run through the bottom, making the cables invisible from every angle.

LEADING SILENCE

With premium construction comes premium noise dampening. Reducing noise requires reducing both transmission and vibration. Because the pump is enclosed in a solid CNCed aluminum block, far less noise can escape. Moreover, the monolithic block mounting prevents vibrations from rattling the surrounding case. This way, we can eliminate the typical vibration-dampening rubber tires typically used to dampen D5 pumps.

GENUINE XYLEM D5 PRO PUMPS

Xylem D5 pumps are the king of watercooling. Strong, silent, and reliable with 50k hours and 5 year lifespan. Xylem is a multi-billion dollar US company that makes pumps for a huge number of industries.

Now if you didn't know, many D5-style pumps on the market are either rebranded Xylem pumps with different company logos, sometimes modified. But at the end of the day, they're all Xylem pumps. Or they're foreign knockoffs, which brings all kinds of questionable reliability.

Here, we chose the Xylem D5 with PWM control and SATA power.Most pumps are sold with the old molex four pin power connector. But molex is a very poor connector and has been replaced by SATA. Your SSDs, HDDs, etc. are powered by SATA. SATA is much safer and easier to use, though many pumps are still sold with molex, mostly because of tradition.

Also, we chose the pure power model, rather than a "vario" design. The vario is tiny knob on the bottom to adjust the power. However, with the ubiquity of PWM control, the pumps today simply don't need vario knobs. And vario knobs add another point of failure.

Additionally, our pro pump is unsleeved for easier cable routing. Because the Optimus D5 Reservoir is designed to keep cables hidden, we went for flex over sleeves.

O-RING GROOVES
Because the Optimus D5 Reservoir uses an extra thick cast acrylic tube, we're able to machine o-ring grooves directly into the end of the tubes. This makes reassembly a piece of cake as well as eliminates potential o-ring unseating issues.

PLASTICIZER-FREE EPDM O-RINGS
Optimus features plasticizer-free EPDM o-rings. While most know about plasticizer in tubing, cheap o-rings are a hidden cause of problems in loops. When mystery goo appears, it's typically materials breaking down and combining with fluids.

RESERVOIR CAP
The Optimus reservoir comes with an ultra clean acrylic cap. Because the reservoir tube features male threads on the bottom and female threads on the top, the top caps mount flush with the reservoir to create a smooth, nearly seamless look. And because our machining and acrylic expansion negligible, the top cap can easily be hand removed for venting PC loops and maintenance.

While having the in/out ports near the pump are the most popular option, optional caps include single ports and triple ports with or without knurl in multiple materials.

Specifications

Dimensions

- 12" TALL SYSTEM: 12" x 3" x 3" (306mm x 75mm x 75mm), 230mm tall reservoir
- 8.5" TALL SYSTEM: 8.5" x 3" x 3" (216mm x 75mm x 75mm), 140mm tall reservoir
- 5.75" TALL SYSTEM: 5.75" x 3" x 3" (146mm x 75mm x 75mm), 70mm tall reservoir
- RESERVOIR TUBE:
    - OUTSIDE DIAMETER: 2.75" (70mm)
    - INSIDE DIAMETER: 2.5" (63mm)
    - WALL THICKNESS: ¼" (6.4mm)
- BASE WITH PUMP TOP (NO RES): 2.7" tall x 3" wide x 3" deep (69mm x 75mm x 75mm)

Materials

- RESERVOIR TUBE: Spartech Polycast™ cast acrylic
- RESERVOIR CAPS: Spartech Polycast™ or black Röchling acetal
- PUMP TOP:Spartech Polycast™ or black Röchling acetal
- PUMP HEAT SINK: US-sourced machined 6061-T6 (511) aluminum, anodized
- VORTEX BREAKER:Optimus Pro-XE nickel over copper, Optimus-made brass screws with Pro-XE nickel
- O-RINGS: US-made plasticizer-free EPDM o-rings including D5 o-ring
- SCREWS: 18-8 stainless steel or black oxide over stainless steel mounting screws

Compatibility

- MOUNTING: Bottom mounting compatible with case pump brackets like Lian Li cases. Back mounting holes compatible with slot mounts like NZXT cases.
- FLUIDS: H20, distilled water, all coolants
- MODULARITY: Modular design so any reservoir, top, heat sink or cap can be replaced or swapped out for a different look.

In The Box

- 1 x Assembled D5 Reservoir system
- 4 x mounting screws, washers

Additional Information

Brand	Optimus
SKU	OP-RES-AC-12-D5INCL-SL
Weight	6.0000
Color	Silver
Reservoir Type	Tube Res
Tube Res Length	230mm
Pump Type	Xylem D5 PWM