

Jacket vs Rear-Inflation BCDs

Why More Recreational Divers Are Moving to Back Plate and Wing Systems

For many years, the traditional jacket-style Buoyancy Control Device (BCD) has been the standard setup for recreational scuba divers. Walk into almost any dive shop or training environment and you would see rows of familiar wrap-around jacket BCDs hanging on the wall. They are stable, intuitive, and have introduced generations of divers to the underwater world.

In recent years, however, rear-inflation BCDs — often referred to as “back plate and wing” systems — have become increasingly popular outside the technical diving community. Once seen almost exclusively on deep wreck divers, cave divers, and advanced technical divers, these streamlined systems are now appearing on recreational dive boats around New Zealand and around the world.

So what is driving the change, and what are the real differences between the two systems?

The Traditional Jacket BCD

A jacket-style BCD wraps around the diver’s torso, with air bladders positioned around the sides and sometimes the front of the body. When inflated, the diver feels “hugged” by the BCD.

This design has several advantages:

- Excellent surface flotation
- Stable upright position at the surface
- Familiar and easy for new divers
- Integrated pockets and storage
- Widely available through rental fleets and training agencies

For many divers, especially newer divers, the jacket BCD feels reassuring. On the surface it naturally keeps the diver upright, which is useful during entries, exits, or surface waits in choppy conditions.

Underwater, however, the same design can have drawbacks.

Trim and Position in the Water

One of the biggest differences between jacket and rear-inflation systems is underwater trim.

“Trim” refers to how a diver sits in the water column — ideally in a flat, horizontal position. Good trim reduces drag, improves finning efficiency, conserves gas, and helps avoid disturbing the seabed.

With a jacket BCD, the air cell wraps around the body. As air moves within the bladder, it can shift the diver into a slightly vertical position underwater. Many recreational divers end up swimming with their head higher than their fins, creating extra resistance through the water.

Rear-inflation BCDs position all the buoyancy behind the diver. The air cell sits between the diver and the tank, naturally encouraging a flatter, more horizontal trim position.

This creates several noticeable benefits:

- Improved streamlining
- Less drag in the water
- Easier frog kicking and efficient finning
- Reduced effort and air consumption
- Better control when hovering

Many divers switching to a wing system immediately comment on how much more “balanced” they feel underwater.

Surface Behaviour

The biggest criticism of rear-inflation BCDs has traditionally been their behaviour at the surface.

Because all the buoyancy is behind the diver, a fully inflated wing can push the diver slightly forward if they are not positioned correctly. Early rear-inflation systems developed a reputation for being less comfortable during long surface waits.

In practice, modern recreational wing systems are far more refined than older designs, and proper weighting and body position largely eliminate the issue. Many divers quickly adapt by leaning back slightly while floating on the surface.

Meanwhile, jacket BCDs still excel at keeping divers upright without effort, which remains one reason they are popular in entry-level training.

Why Tech Divers Adopted Wings First

Technical divers were early adopters of back plate and wing systems because of the flexibility and streamlining they offered.

Technical diving often involves:

- Multiple cylinders
- Stage bottles
- Decompression equipment
- Long bottom times
- Tight spaces such as caves or wrecks

The modular nature of a back plate and wing system made it ideal. Divers could swap wings, harnesses, and accessories depending on the dive.

The minimalist harness also removed unnecessary bulk and failure points.

Over time, technical divers discovered another major advantage: comfort and freedom of movement.

Without large padded sections wrapping around the torso, wing systems often feel lighter and less restrictive underwater.

Why Recreational Divers Are Switching

Today, many recreational divers are discovering those same advantages.

Modern rear-inflation recreational systems are:

- Simpler
- More travel friendly
- More streamlined
- Less bulky
- Highly adjustable

Divers often describe the sensation as feeling “less cluttered” or “less cumbersome” underwater.

There is also a growing emphasis on improving diving skills beyond the minimum required for certification. Social media, online training content, and the influence of technical diving have introduced more recreational divers to concepts like trim, propulsion techniques, and efficient buoyancy control.

As a result, many divers are choosing equipment that supports those skills.

Another factor is longevity. A good back plate and wing setup can evolve with the diver. Instead of replacing an entire BCD when diving styles change, components can often be upgraded individually.

Which One Is Better?

The honest answer is: neither system is universally better.

A jacket BCD remains an excellent option for:

- New divers
- Casual holiday divers
- Divers who prioritise surface comfort
- Rental and training environments

Rear-inflation systems appeal strongly to divers who:

- Want improved trim and streamlining
- Prefer minimalist equipment

- Enjoy underwater photography
- Are interested in skill development
- Plan to progress into advanced or technical diving

The best choice ultimately comes down to personal preference, diving style, and comfort in the water.

Final Thoughts

The rise of rear-inflation and back plate and wing systems in recreational diving reflects a broader evolution in diving culture. Recreational divers today are increasingly interested not just in seeing marine life, but in becoming more efficient, comfortable, and capable underwater.

Jacket BCDs remain dependable and highly effective, but rear-inflation systems offer a different diving experience — one that many divers find more streamlined, balanced, and enjoyable.

For divers curious about making the switch, the best approach is simple: try one in the water. A single dive is often enough to understand why so many divers, from beginners to experienced instructors, are embracing the wing.