SIDEMOUNT CONFIGURATION
EQUIPMENT CHECKLIST

SIDEMOUNT SYSTEM

Harness Requirements

☐ No shoulder buckles (creating unnecessary failure points)
☐ Low-profile waist buckle
☐ 1× D-ring on each shoulder (low-profile D-rings recommended)
☐ Upper cylinder attachment (bungee)
  OPTION A - Loop bungees:
    1× triglide below each shoulder D-ring, used as bungee attachment points
  OPTION B - Continuous bungees:
    Attached to shoulder D-rings on either side, using small swiveling bolt-snap clips
☐ Lower cylinder attachment (clips, assuming aluminum cylinders)
  OPTION A - Fixed D-rings:
    2× low-profile waist D-rings on each side
  OPTION B - Sliding D-rings:
    1× sliding waist D-ring on each side
☐ 2× DAPs (Drop Attachment Points) on the back, to carry the pouch
☐ 1× crotch-strap, equipped with
  ☐ 1× rear D-ring on the back (or B-ring on the Razor system) & 1× front DPV D-ring

Wing Requirements

☐ Diamond-shaped wing
☐ Wing independent from the harness
☐ No "over the shoulder" dump valve
☐ K-style power inflator
☐ Bungee style attachment (front)

Recommended Sidemount Systems

- Razor sidemount system (our recommendation, any version works)
- XDEEP sidemount system (TEC version, but not RB)

Other systems may be used, provided they allow the above-described configuration without compromise.

SIDEMOUNT POUCH & BACKUP / SPARE ITEMS

Sidemount Pouch

☐ Equipped with 2× double-ended bolt-snap clips (alternatively, 2× small bolt-snap clips)
☐ Has several compartments to properly separate carried items
☐ Has at least one internal bungee to secure some of the carried items
- Contains the following items
  ☐ 1× backup mask
  ☐ 1× backup 37 m (120 ft) safety line (finger spool)
  ☐ 1× backup mouthpiece
  ☐ 3× strong cable ties (zip ties)
  ☐ 1× spare continuous bungee or choker (neck leash) if using loop bungees
- ADDITIONALLY – For Overhead Diving Courses:
  ☐ 1× backup light (alternatively, both backup lights may be helmet-mounted)
  ☐ 1× backup navigation kit with 3 cave arrows
  ☐ 1× multi-tool
  ☐ 1× additional choker (neck leash)

REGULATOR SYSTEM

Left Side

- ☐ DIN regulator first stage with 5th port swivel turret, equipped with:
  - ☐ 1× LP short hose equipped with a 90° LP elbow adaptor
  - ☐ 1× balanced regulator second stage equipped with a necklace (shock or paracord)
  - ☐ 1× pressure-reading instrument

    OPTION A - Analog:
    - ☐ 1× HP hose
    - ☐ 1× SPG (black face recommended; bar or PSI, but identical on both sides)

    OPTION B - Digital:
    - ☐ 1× transmitter (in this case, a "pin" or "mini" SPG is recommended)
  - ☐ 1× LP inflator hose for the wing (or drysuit, when applicable)

Right Side

- ☐ DIN regulator first stage with 5th port swivel turret, equipped with:
  - ☐ 1× LP long hose equipped with a breakaway / cuttable small bolt-snap clip
  - ☐ 1× balanced regulator second stage
  - ☐ 1× pressure-reading instrument

    OPTION A - Analog:
    - ☐ 1× HP hose
    - ☐ 1× SPG (black face recommended; bar or PSI, but identical on both sides)

    OPTION B - Digital:
    - ☐ 1× transmitter (in this case, a "pin" or "mini" SPG is recommended)
  - ☐ 1× LP inflator hose for the wing (when diving in a drysuit configuration)

LIGHTING SYSTEM

Primary Light

- OPTION A - Canister Light (recommended):
  - ☐ With cord length appropriate for sidemount; 120-150 cm (4-5 ft)
  - ☐ Equipped with a small swiveling bolt-snap clip attached to or near the light-head
- OPTION B - Handheld Light:
  - ☐ Small swiveling bolt snap clip attached to or near the back of the light

Mounting

- OPTION A - Razor Mounts (highly recommended):
  - ☐ Razor light-mount (on primary light-head)
  - ☐ Razor hand-mount (left hand)
  - ☐ Razor helmet-mount (left side of helmet, when applicable)
- OPTION B - Goodman Handle:
  - ☐ Goodman handle attached to the light-head (not recommended)
  - X Cannot be placed on the helmet (when applicable)

Backup Lights

- ☐ 2× low profile backup lights for overhead diving; only 1 for open water diving
- ☐ Equipped with small swiveling bolt-snap clip attached to the back of each light

When using a canister light, the canister will be installed underneath the crotch strap.

For Overhead Diving, at least one backup light will be helmet-mounted and deployable. The second backup light can be either helmet-mounted or carried in the pouch.

INSTRUMENTS & ADDITIONAL EQUIPMENT

Instruments

- ☐ 1× nitrox computer (multi-gas in case of decompression diving)
- ☐ 1× backup multi-gas computer (in case of decompression diving only)
- ☐ 1× analog compass or computer integrated digital compass

Safety Items

- ☐ 2× safety lines, 37 m (120 ft) long; one is carried on the rear D-ring, the other one in the pouch
- ☐ 2× line cutters (seahorse or U-shape) carried on wrist instruments and / or shoulder harness
- ☐ 1× SMB (surface marking buoy) for entry-level sidemount and decompression courses

Writing Device

- ☐ 1× wrist slate with 3 pages
- ☐ 1× wet note (for technical / deep diving only, carried in the pouch)

Thermic Protection & Basics

- ☐ Full wetsuit (7mm recommended, or 5mm with hooded vest)
- ☐ or drysuit (low profile, “cave” or “summer” cut)
- ☐ Booties (5 mm recommended) or rock-boots
- ☐ Hood or hooded vest
- ☐ Gloves are authorized (not required), must have trimmed fingertips
- ☐ 2× masks (low profile, opaque skirt, and frameless recommended)
- ☐ 1× pair of fins (open-heeled, no split, nor free dive, nor force fins, low profile straps)

Helmet for Overhead Diving Courses

- ☐ Equipped with the Razor helmet-mount on the left side
- ☐ Carrying at least one backup light on the right side (must be deployable)

Hose Retainers

- ☐ 3× hose retainers minimum

SIDEMOUNT SYSTEM CONFIGURATION - NOTES

The wing and harness must be independent components, allowing the wing’s vertical positioning to match the diver’s body structure and trim. Fixed or integrated systems limit proper positioning.

The harness is adjusted to fixed cylinder attachment points defined by the neck bungee and lower tank band, not the other way around.

The lower tank band should be positioned as low as possible to maximize stability; adjust the harness, not the cylinder hardware. Corrugated hose length depends on the diver’s body structure.

TYPICAL HOSE LENGTH RANGES

These values represent commonly used ranges, not mandatory standards:

- Long regulator hose: 210 cm (7 ft) (fixed)
- Short regulator hose: 55-63 cm (22-25 in)
- LP inflator hoses (wing / drysuit): 8-23 cm (3-9 in)
- HP / SPG hoses: 15 cm (6 in)
- Corrugated hose: 33-48 cm (13-19 in)

HOSE ROUTING - NOTES

In sidemount diving, only the long hose has a defined length. All other hoses must be selected and adjusted according to the diver's body structure, regulator routing, position of valves (e.g. inflator valve on a drysuit), and overall configuration.

The long hose is used for gas sharing and is therefore standardized. All remaining hoses (short regulator, inflator, and pressure-reading hoses) must be sized to allow clean routing, freedom of movement, and reliable operation without excess slack or tension.

Hoses that are too long create clutter and entanglement risks; hoses that are too short restrict movement, complicate regulator switches, and place unnecessary stress on fittings. Proper hose length selection is part of correct sidemount setup and must be addressed on an individual basis.

The short low-pressure hose used for the left regulator should be long enough to allow the diver to look to the left while breathing normally, and no longer. Excess length creates unnecessary loops and potential entanglement.

The LP inflator hoses (wing / drysuit) as straight as possible from the regulator first stage to their attachment points — without bending nor stressing attachment hardware, or artificially stabilizing tank position or trim. Routing that "supports" the cylinders is a *cheat* and undermines proper equipment configuration.

When longer LP inflator hose length is truly required for routing or ergonomics, a rotating 90° LP elbow (swivel adaptor) can be used. This allows hose alignment without stress or unnatural bends while maintaining clean routing and attachment geometry.

Corrugated hose length also varies with the diver's torso length and wing positioning. It should never be assumed to be universal.

DRYSUIT CONFIGURATION - NOTES

- The left regulator is on the primary cylinder (first on / last off) and must supply the drysuit inflator.
- The right regulator is on the secondary cylinder (first off / last on), used for gas donation or pushing a single cylinder through restrictions, and must not supply the drysuit inflator.
- Consequently, the drysuit LPI is supplied from the left regulator; the wing LPI from the right.
- The drysuit dump valve is on the left arm. In the event of runaway inflation, the diver must be able to dump gas and shut down the left valve simultaneously if quick disconnection is not possible.
- The wing dump valve must be either on the same side as the drysuit dump (e.g. Razor-style) or centered at the lower rear (e.g. XDEEP-style), never on the right side, as this would prevent simultaneous dumping of wing and drysuit.
- Ideally, all emergency procedures should allow one hand to remain free to maintain contact with a cave line, ascent/descent line, decompression platform, or lift bag.
- To meet these criteria, the wing corrugated inflator hose is routed to the right side, connected to the right regulator first stage.
- Thigh pockets are not a replacement for the sidemount pouch. Items placed in thigh pockets are difficult to access — and nearly impossible to retrieve when carrying stage cylinders. Additionally, loading items in thigh pockets adds bulk on the diver's sides, which prevents cylinders from seating properly against the hips and compromises trim and stability. Therefore, all necessary spares and backups should be carried in the designated sidemount pouch, not thigh pockets.

Primary Light Considerations for Cave Diving

A canister light can look like an unnecessary complication, when a handheld light feels simpler and more compact. In reality, once you understand the mechanics of cave diving, the canister light becomes the more logical and efficient tool.

The "annoying cable" argument

The light cord is often cited as a drawback. In practice, it's a non-issue. It's part of hose configuration, something you learn once. Properly routed, the cable sits cleanly along the body and does not interfere. Cave diving has equipment choices that initially look complex but really are not. The light cord is one of them.

Small light head, big advantage

A handheld light houses its batteries inside the head, which makes it large and bulky. In contrast, a canister light separates the power source from the head, allowing it to be small, light, and precise.

When using a helmet light-mount, the difference is even more obvious. A large light head makes the setup clumsy. A compact light head is simply more appropriate for that use.

Beam quality: optics matter more than raw power

Because handheld lights must allocate internal space to batteries, they are limited in reflector depth. Many uses multiple LEDs to achieve brightness. The result is often an uneven beam with spill.

A high-quality canister lights typically use a single powerful LED with a deep, better designed reflector. This produces a tight and well-defined beam with better penetration. A crisp beam allows better communication.

Burn time is not the main point — but it still matters

Longer burn time is often highlighted as the main advantage of canister lights (only with large caisters). While true, it's not the most important factor for everyone. Not every cave dive pushes burn limits.

Designed for the environment

Caves are unforgiving environments. Equipment choices should prioritize, precision over convenience, control over simplicity, and function over appearance.

The canister light is not a "tech diver fashion item." It is a solution to real problems: beam quality, ergonomics, communication, and overall control.

The question stops being *"Why use a canister light?"* and becomes *"Why would I choose anything else?"*.

Final Notes & Recommendations

Questions & Clarifications: If anything in this checklist is unclear, or you need further explanations, please contact us. Some concepts or equipment details outside the course context may seem confusing.
— We're happy to clarify.

Equipment Rentals: Some equipment can be rented, including regulators, primary/backup lights, and backmount wings with backplates. Personal items must be provided by the diver, such as fins, masks, dive computers, and exposure protection (wetsuit or drysuit).
— Rental availability should be confirmed in advance.

Equipment Responsibility: Divers are responsible for the proper functioning of their equipment. For advanced courses, students are assumed to understand the purpose and operation of their gear. For fundamental or entry-level courses (like Sidemount Diver), we provide full guidance on equipment use and configuration.

Sidemount Systems: Owning a personal sidemount system is strongly recommended, as it is highly individualized. Renting a system is possible but requires time for setup and adjustment.
— Sidemount systems can be purchased through CDT Mexico.

Preparation & Familiarity: Proper equipment preparation is essential for safe and efficient training. Divers should arrive with functional, well-maintained equipment and be comfortable using it independently.