

# BACK MOUNT COURSE EQUIPMENT LIST

This list covers basic backmount equipment and reviews specific accessories for technical courses and cave training.



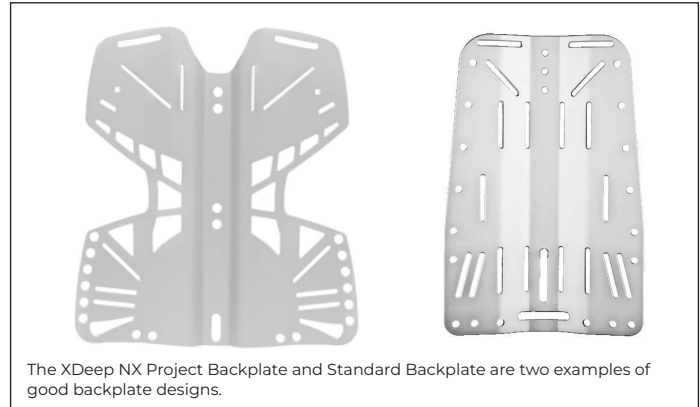
## BACKPLATE, HARNESS & WING

Your backplate, harness, and wing are the core of your cave diving equipment configuration. For your dives in Mexico, your equipment choices should be appropriate for double aluminum 11.1 liter tanks (80ft<sup>3</sup>) as these are the standard tanks in Mexico.

### Backplates

Divers should consider two main features when selecting backplates: length and weight/buoyancy characteristics.

**Length:** For most divers, a standard-length backplate will work well. However, standard-length backplates tend to dig into the lower back of smaller divers, particularly petite women. For divers under 160 cm/ 5'4", it would be a good idea to try on both a standard and a short backplate before making your final purchasing decision.

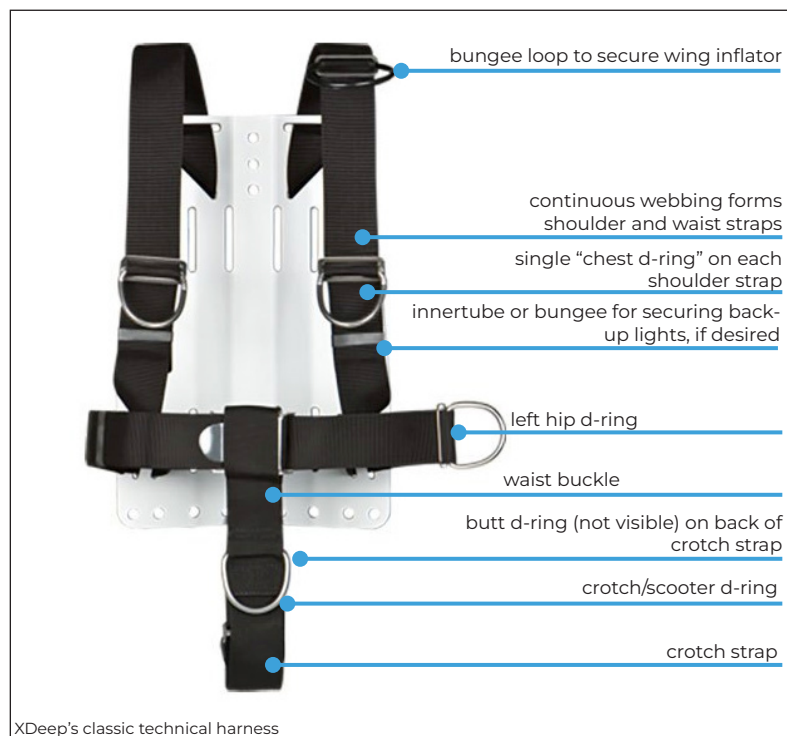


**Weight/buoyancy:** Backplates are typically available in steel, aluminum, or carbon fiber, the characteristics of which will affect the amount of weight you need for diving and the ease of packing/traveling with them. Additionally, innovative backplate designs with strategic cutouts have hit the market in the last few years, giving divers even more options!

With a wetsuit, slim or muscular divers will often be okay with an aluminum backplate and no weights in backmount doubles. Divers with more bulk or drysuits will prefer steel backplates, as they can reduce or eliminate the need to add weights to the system. However, those who prefer to reduce their luggage weight should be fine -- if you choose to use a lightweight backplate and expect to need weights, we have v-weights at the shop for double tanks.

### Harness

Harness for technical diving should be "DIR" style -- a continuous piece of webbing runs through the backplate to form both the shoulder and waist straps. A second piece of webbing is connected to the bottom of the backplate to create the crotch strap, either straight from the bottom middle of the backplate or in a v-shape from the bottom sides of the backplate. The harness should have a single chest d-ring on each shoulder and a bungee loop to secure the inflation hose from the wing to the harness. On the crotch strap, the webbing should have a scooter/crotch d-ring and butt d-ring. The waistband should have a left hip d-ring and a buckle for closure. Keep it simple and try to avoid adding additional d-rings. Technical diving harnesses should not have buckles on the shoulder straps unless needed due to physical/mobility constraints.



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## Wing

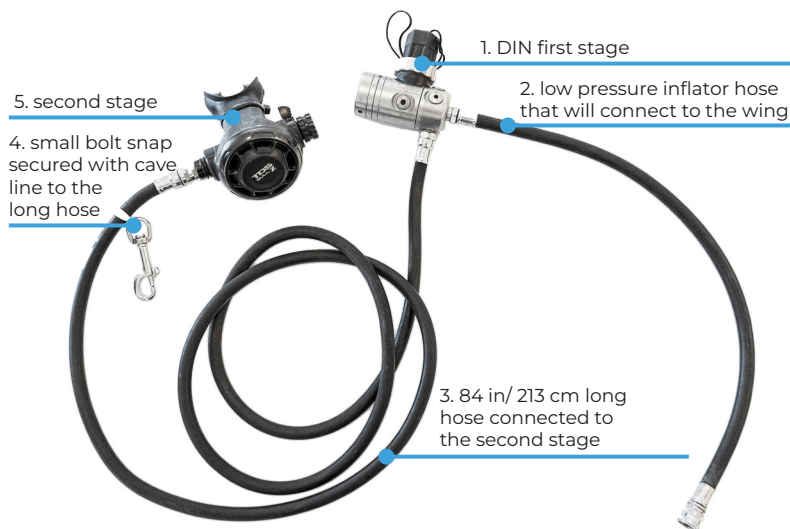
Your wing should be appropriate for aluminum double 11.1 L/80ft<sup>3</sup> tanks. A good amount of lift is 18/23 kgs or 40-45 lbs. Most divers prefer modern “donut-shaped wings” to allow gas to move freely within the wing. Wings should be free of bungee/compression loops around the wing’s exterior.

## REGULATORS

Chose your regulator based on the dive environments and types of diving you will do. If you plan to dive in cold water, looking into environmentally sealed regulators is a good idea. Some of the most commonly purchased brands and models are the Apeks XTX50, Atomic Aquatics Z2 or B2, and ScubaPro MK25s. Each of these models has the advantage of being easily convertible to sidemount and stage diving configurations as your needs and dive plans evolve.



The Xdeep Hydros 40 Wing works well for Mexico's dive sites.



Right regulator

## Hoses

Regulator sets often include standard-length hoses and will make a good starting point for your regulator configuration. We recommend rubber hoses over braided hoses, as rubber hoses are more durable than their braided counterparts. Hose lengths are personal, so if you are unsure of the lengths that will fit you best, refrain from guessing. We have all standard hose lengths in our demo supplies and are happy to let you experiment with different lengths before purchase. Various hoses, clips, and bungees are available at Under the Jungle.

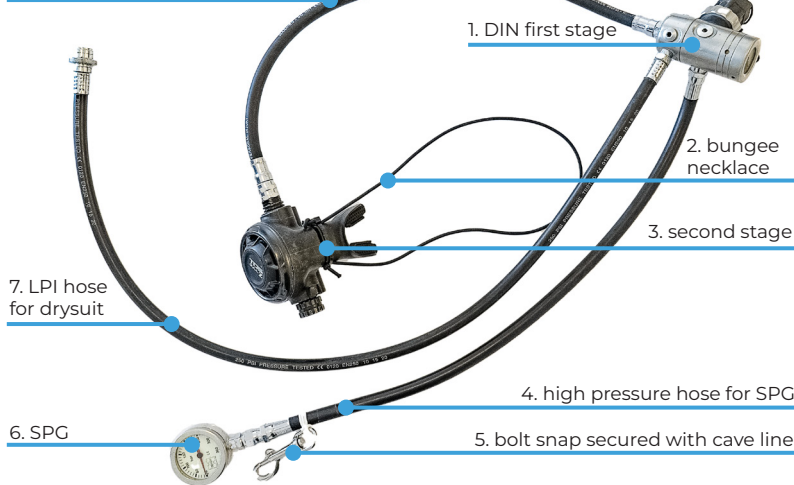
## Right Regulator Configuration

- 1. DIN first stages** are required for technical diving; yoke is not acceptable.
- 2. A low pressure inflator (LPI) hose** that connects to the inflator mechanism on the wing. Most wings come with an appropriately sized LPI hose (14-24 in/ 35 - 61 cm). If you are still determining which LPI hose length will work best for you, try a variety of demo hoses at our shop before purchasing.
- 3. The long hose** is a standard length regardless of diver size, 84 in/213 cm; rubber hoses are preferred.
- 4. The bolt snap** should be small and stainless steel. It should be attached to the long hose with cave line (we can show you how to tie it). We have a few styles and sizes of small bolt snaps available at Under the Jungle.
- 5. The second stage** is connected directly to the long hose; no 90° or 110° adaptors should be used as doing so makes sharing gas more difficult. Please send us a message if you feel that you need accommodation.

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8. short hose connected to the second stage



Left regulator

cm for smaller divers.

## Left Regulator Configuration

**1. The DIN first stage** on the left side should be the same model as the right side first stage.

**2. A bungee necklace** permanently attached to the second stage - we can help you set up and size the necklace appropriately. A variety of bungee thicknesses are available at the shop.

**3. The second stage** should be connected directly to the short hose, with no angled adaptors.

**4. A high pressure (HP) hose**, which is usually 24 in/ 61 cm for tall people and 22 in/ 56

**5. A bolt snap** (stainless steel) secured to the HP hose with cave line (we can show you how). The bolt snap should be large enough to put your finger through the eye.

**6. One submersible pressure gauge (SPG)**, ideally brass and glass, and either 2.0 or 2.5 in/ 2-6.3 cm in diameter. If you prefer transmitters, replace items 4-6 with a transmitter connected directly to the first stage.

**7. An optional low pressure inflator (LPI)** hose that connects to the drysuit's inflator. This hose is only for drysuit configurations, and no hose is needed for divers using wetsuits. Most drysuits come with an appropriately sized LPI hose, although we do have other options available at the shop.

## EXPOSURE PROTECTION

The water in the cenotes is a "warm" 77° F/ 25° C and remains constant throughout the year. During dive training, students will often spend 4-5 hours in the water each day, and even this warm water can chill divers eventually.

### Wetsuits

A minimum thickness of 5mm is necessary for divers who do not chill quickly. We suggest a 7mm suit and even a second layer/vest for divers who run colder. Thigh pockets or tek shorts are a must for wetsuit divers.

### Drysuits

If you are already an experienced drysuit diver, bringing your drysuit with a thin base layer (such as ski underwear) and a second light layer to put on top if you start to chill is preferable. Drysuits can help balance trim in doubles and are generally more comfortable and cleaner.

### Booties and Hood

Wetsuit divers should use dive booties. Booties will protect your feet at the dive site and keep your feet warm during the dives. Full-foot fins are generally not used in technical diving. Bring a hood (even if it is thin) to protect your head and keep you warm.



# BACK MOUNT COURSE EQUIPMENT LIST



## MASKS AND FINS

Select comfortable masks and fins that will give you optimal trim for backmounted doubles.

### Masks

Each diver will need a primary and a backup mask. Masks should be of equal quality and comfort. Treat both masks to prevent fogging with toothpaste, a mask buffing product, or flaming (before arrival if possible). Low-volume masks are generally easier to clear and will fit better in your thigh pocket. Bring a stainless steel double-ender clip to connect the mask to the bungee leash inside the thigh pockets. We sell and rent low-volume masks, mask cleaning products, and stainless steel clips at the shop if you prefer to purchase or borrow these products upon arrival in Mexico.

### Fins

Divers should use open-heel fins with spring or bungee straps. Stiff blade fins are preferable to floppier models. Divers should refrain from using split fins in technical diving (let us know if you need accommodation). Heavy fin models such as ScubaPro Jets, OMS Slipstreams, or stiff fins like the Dive Rite XTs will balance backmount divers better than neutral or buoyant fins. We have many fins models at the shop, and we can reserve them for you with advanced notice if you want to experiment with different models.



1. ScubaPro Jet Fins 2. OMS Slipstreams 3. Dive Rite XTs 4. XDeep low volume, frameless masks. Choose masks and fins that are comfortable to you, these brands are just examples -- they are not necessarily perfect for you.

## LIGHTS

You will need a primary and two backup lights for all training with Under the Jungle. We have lights for rent and sale at the shop if you want to wait to commit to purchasing a primary light.

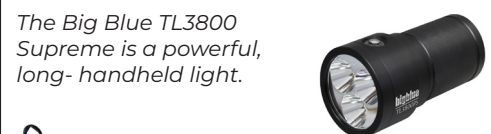
### Primary light

Primary lights should have a minimum burn time of four hours on the medium power setting. Divers may use handheld or canister lights per their preference and need a light handle that allows them to switch the light between hands quickly. The two most popular handles are Goodman handles and the Razor hand-mount. You'll need a double-ender clip to temporarily attach the light to your left chest D-ring while working with your hands; we call this a *working double-ender*.

No matter which primary light model you choose, having a focused beam for communication using light signals is essential. Primary light beams should have a maximum 10° angle. Some primary lights can switch between primary light mode with a focused light beam and flood light mode for filming video. These lights are acceptable and a whole lot of fun!



The Halcyon Flare is an excellent high-end canister light. This light is available in a handheld version. Light Monkey also makes excellent canister lights.



The Big Blue TL3800 Supreme is a powerful, long-handled light.



Goodman handles (top) and the Razor hand mount (bottom) are excellent light handles that enable divers to switch the primary light between hands or remove and stow it while working.





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1.



1. Big Blue's AL250 is a great little light with a focused beam. It has a 2-hour burn time, takes 2 AA batteries, and is one of the least expensive lights available. They come in fun colors.

2.



2. Big Blue's AL1300 NP is a powerful backup that uses a rechargeable battery and gets up to 20 hours of burn time on its lowest power.

3. Big Blue also offers excellent combo packs of the AL250 and the AL1300 NP. This deal gets you the AL250 for nearly nothing and is the best of both worlds.

3.



## Backup lights

Two backup lights with a minimum burn time of 2 hours each is required. Some divers prefer twist-on lights if you plan to stow your lights in your thigh pockets. This ends up being personal preference and we can discuss options with you, as well as pros and cons before you purchase your backup lights. As with primary lights, backup lights should have a narrow beam of no more than 10° for effective signaling. Each light should be tied to a small, stainless steel bolt snap with cave line. Lights may use rechargeable or single-use batteries per your preference.

The lights shown are available for purchase at Under the Jungle, as are bolt snaps for attachment.

## Finger spool



All courses offered through Under the Jungle require at least one finger spool with a minimum of 150 ft/ 45 m of line and a stainless steel double ender for

attachment. For technical courses, this spool is used to release DSMBs. For overhead training, divers should have a minimum of 2 safety spools with at least 150 ft/ 45 m of line. These are used in skills such as lost line, team separation and missing reel. In addition, divers taking full cave training will need jump spools, which can be smaller and should have colored line to differentiate them from the cave line. Of course, we sell both safety and jump spools, as well as double enders at the shop.

## Line cutters



The Eezy Cut Trilobite

Two cutting devices are required for technical training. At least one should be a small line cutter, such as the Eezy Cut Trilobite. These line cutters come with various "pouch" (or sheath) options, including a harness pouch for attaching

the line cutter to your waistband, a flexi/shoulder pouch for attaching the shoulder strap, and the wrist pouch for attaching to the computer, as well as replacement blades. Of course, we sell these at the shop in a variety of colors. Small knives mounted on a goodman handle or sheathed on the waistband are also acceptable.

1.



2.



3.



4.



Computers we love. 1. The Shearwater Peregrine is a fantastic entry-level computer that does not support transmitters, trimix, or a compass. 2. The Perdix is a high-end technical computer with all the desired features and a high visibility screen. 3. The Teric is a wrist-mounted computer that does all the things the Perdix does. 4. The SWIFT transmitter.

## Computers

For entry-level courses, a single computer is sufficient. Divers enrolling in technical courses or cave courses should have a computer as well as either a backup computer or a backup depth gauge and timing device. Computers that incorporate a backlit screen have options for gradient factor adjustments, allow multiple gasses, and have electronic compasses are preferable. We also allow transmitters instead of SPGs in our training.

We are Shearwater dealers and are huge fans of their computers. We recommend them over any other brand based on their outstanding customer service and high-quality products.

# BACK MOUNT COURSE EQUIPMENT LIST



## Writing tools

Students should carry a wrist slate or wetnotes for underwater communication and note-taking. Which you choose is a personal preference, and we have demo products for you to experiment with if you are still deciding which you prefer. Slates and wetnotes are available for purchase at Under the Jungle.



## DSMB



For Intro to Tec, ANDP, Extended Range, and Trimix Courses, a DSMB (Delayed Surface Marker Buoy) with a non-return valve, over-pressure valve, and oral inflation valve is required. Small "safety sausage" style DSMBs and lift bags are not acceptable. We have DSMBs available to borrow at the shop but usually do not keep them in stock for sale.

## Line markers

Students enrolled in overhead training will need line markers. The requirement is either three arrows and three cookies or three REMs per student to start training. Markers should be visibly and physically identifiable, and we can help you personalize your line markers during your training. We sell line markers at the shop, so if you are unsure what markers you prefer, please hold off until we discuss the topic during training.



You will also need a marker holder. We have excellent marker holders with integrated pencils for sale at the shop, or you can create one using bungee and a bolt snap.

## BACK MOUNT COURSE EQUIPMENT CHECK LIST

- ☐ Regulators
- ☐ Backplate & harness
- ☐ Wing
- ☐ Masks (2)
- ☐ Fins
- ☐ Wetsuit and booties/ drysuit and undergarment
- ☐ Hood
- ☐ Backup lights (2)
- ☐ Primary light
- ☐ Computers
- ☐ Spool(s)/Reels
- ☐ Line cutters (2)
- ☐ Slate or wetnotes
- ☐ Double ender clips (2) one for primary light, one for backup mask
- ☐ Bolt snaps (3 small, 1 medium) small for long hose, medium for SPG, small for each backup light
- ☐ DSMB (if needed)
- ☐ Line markers (if needed)