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Equipping snorkelers' and divers' feet

Underwater footwear like booties, diving socks and fins work together to protect the feet from external factors such as water temperature, sharp terrain, etc. and also to move the wearer through the water with as little effort as possible.

There is a variety of designs that have been created to help the user enjoy his chosen activity to the maximum.

Diving booties

A diving bootie is worn with an open-heeled fin. Before fitting the fin, your customer should first select his boot as, to accommodate for the boot, the fin's foot area should be larger to accommodate the boot, than if he'd have been wearing the fins barefoot.

The thick, sock-like bootie, made of neoprene material, has two main purposes: to insulate the foot and to protect it.

Insulation works the same as with a wetsuit: the boot allows water to penetrate between the skin and the boot's neoprene material. The body heat then warms up this thin layer of trapped water, keeping the foot warm.

In order for the insulation to work, the boot needs to fit correctly.

- If too small: not only might the wearer eventually experience numbness in his toes, the seams may wear out and allow cold water into the boots. With the continual in-flow of cold water, the feet will continue to feel cold.
- If too big: water won't get trapped between the foot and the boot, which means the water won't get heated by the body warmth and it will stay cold – and the foot as well.

To find the right boot fit:

- Size: start with the same size as the customer's shoe. Diving boots only come in whole sizes, so if he wears a half size go one up.
 - o Diving boots are in men's sizes. For ladies, take their normal shoe size in UK size and recommend they try on a boot half a UK size smaller.
- The boot should fit snug: not too loose, not too tight.

Our cut-out-and-keep series to assist retailers with product knowledge

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- The toes shouldn't be curled up in the front – this shows the boot is too small.
- Other factors that affect how warm the boot keeps the foot:
- Material thickness: the thicker the material, the more warmth. The required material thickness is dependent on the temperature of the water. As a guide, the boot's material thickness should match that of your customer's wetsuit.
 - o For warm/tropical water, look at about 2-5mm.
 - o For cold water, your customer will want 5mm or thicker.

- Fastenings: the type of fastening also makes a difference to the warmth provided. Factors include if there is a Velcro strap or tab to reduce the water transfer in and out of the boots, if there is a supplemental material such as titanium, and the number of seams (the fewer seams, the lower the chance of a leak).

- o A zip makes the putting on and taking off process easier, but zippers typically create leaks. An inside gusset underneath the zip will limit leaks and increase warmth.

Boots are not only meant to keep the feet warm, they are also there for protection: some have a flexible, reinforced sole. This sole also increases the life of the neoprene boot, which itself isn't very strong, and makes the boot slip-resistant.

There are different types of soles:

- Soft sole: for those who will be diving off a boat or entering and exiting the water on soft sandy beaches with no debris.
- Medium sole: for areas where the wearer will be using stairs to reach the water, or walking over smaller hazards that the feet will need some protection from.
- Hard, heavy duty sole: if the wearer will have to cross rocks to gain access to the water. This sole is similar to that of a sneaker's. There are also different boot cuts:
 - Low- to mid-top: for warm water diving. These are worn to help reduce chafing
 - High top: cold water diving. A higher cut, which overlaps the wetsuit legs, can also help prevent foreign objects from entering. Advise your customers to care for their diving boots:
 - Rinse in fresh water. Salt water can cause neoprene to lose its flexibility. Also, unrinsed neoprene will start to smell.
 - Soak the boots for about 15 minutes. Your customer can also use a wet suit shampoo on the boots.
 - The boots should not be dried in a dryer.
 - Before the boots are stored, they should be inspected for damage.
 - Storage:
 - o Boots should be stored where **To p58**



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they won't be creased, which will reduce their insulation effectiveness.

- o Store out of direct sunlight
- o Aerosol spray shouldn't be used near the boots – it can degrade the neoprene.

Water socks

Snorkelers wear footwear to protect their feet from sharp objects or chafing. Snorkelers who will be in warmer water won't require the insulation that divers need.

Water socks reduce chafing from fins, which typically occurs near the ankle and around the heel where the fin's foot pocket rubs against the foot. The rubbing can lead to blisters.

Water socks are worn with full-foot fins.

Fins

Fins help to protect the feet, allow a snorkeler to tread water without using too much energy, and provides added propulsion for a diver.

Fins are available with two types of foot pockets: a full-foot style, which is enclosed at the back, and an open-heel style that doesn't enclose the foot, but has an adjustable strap around the heel.

- **Open-heel fins** are usually worn with a boot, with the fin's adjustable strap wrapped around the back of the boot. An open-heel-fin-with-boot combo offers insulation and protection for the foot. If the wearer will be walking over rocky terrain or climbing a boat ladder, for example, he should wear an open-heel fin.
 - o Suggest to your customer that he carries a complete spare strap and a buckle with him, in case it breaks and he's left in the lurch.
- **Full-foot fins:** As the name suggests, the foot is enclosed as if the wearer is wearing a pair of shoes.
 - o Worn barefoot. If there is chafing, thin neoprene socks can be worn with the fins.
 - o For use in warm water, where the wearer won't require a boot for extra insulation.
 - o It is easier to slip on a surface such as a boat, when wearing full-foot fins.

Fin style: the style and design of the fin depends on what the user requires from his fins.

- **Paddle fins:**
 - o Each fin works as an extension of the foot while kicking, which offers more surface area to propel the wearer forward.
 - o This style enables the wearer to create quick thrusts that equal to a fast accelerating speed, and offer good control as well as manoeuvrability.
 - o Paddle fins use a number of different technologies. Some use rubber channels to scoop water. Others use articulated hinges or a pivot blade design to create the correct angle, increasing efficiency as well as propulsion.
 - o Blade stiffness should be matched to the customer's finning leg fitness. You

shouldn't sell a stiff blade to a beginner or a soft blade to a more experienced diver.

- **Split fin:** a slit runs down the middle of the fin
 - o As the wearer kicks downward, water channels through the split in the fin, which creates a *spring-like* action. This maximises each kick's power and efficiency, while propelling the person forward.
 - o A split fin is ideal for longer swims as the wearer needs to use less energy.
 - o If your customer has current or past knee problems, recommend a split fin for him as it reduces resistance felt by the joints.
 - o While moving forward is made easier, other movements are hindered by this style. It's more difficult to back pedal or to move around in enclosed areas, and the style's not good if the wearer uses a frog kick.
 - o Split fins don't provide a lot of feedback and are less precise for controlled movements and positioning.
 - o It's important to recommend quality split fins, because the usefulness of the design relies on getting the technology right.
- **Jet fins** are similar to the paddle style, but shorter. The rubber design is durable and although decades old, is still favoured by many technical, commercial and military divers.

Will your customer use his fins for diving or snorkelling?

Dividing fins: divers need propulsion power from their fins. Channels on the fins and the split fin design (see above) help improve propulsion.

- With the help of channels, which guide water across or through the fin, the diver can move faster through the water, because there is then less surface area resistance in the water.
 - Channels also offer extra fin flexibility, which enables the fin to bend further and to move more water with each kick.
 - Split fins are the most efficient for a diver, as he doesn't push the water behind him – instead he is propelled forward by the lift created by the water moving through the slit.
 - Pivoting Blade fins look similar to paddle fins, but instead of using channels to thrust water off the blade, articulated hinges help to create the correct angle of attack to maximise both propulsion and efficiency.
- Divers tend to require added insulation – this is true for their feet as well. They should therefore use open-heel fins, which allow the diver to also wear dive socks or boots for added insulation.
- If your customer will be diving in warm waters, he can wear a full-foot design. He shouldn't use snorkel fins for diving, though.

Snorkel fins: A basic snorkeler's fins are typically shorter and lighter than dive fins, because he doesn't need all the extra propulsion that a diver needs. If your customer is someone who will be diving for crayfish, free diving, etc., he'll need longer, more technical fins.

- For shorter snorkel trips: paddle fins.
- For longer snorkel trips: split fins or pivoting blade fins. Over a longer swim, older design paddle fins are considered to be less efficient.
- Full-foot fins: snorkelling tends to take place in warmer water and the foot therefore doesn't require further insulation.

Fitting the fin:

- Make sure your customer feels comfortable in the fins and doesn't feel hard spots rubbing when he flexes his feet.
- The fins should feel snug, but not too tight. As the feet cool down in the water, they will shrink slightly.
 - o Men: start trying on fins of the same size as their shoes. Women: try one size smaller than their shoes.
 - o If your customer's feet start to tingle while wearing the fins, they are too small.
 - o If a full-foot fin rubs against the ankle bone, it's too big.
- Open-heel fin:
 - o Adjust the strap to the loosest position before having your customer try the fin on. Once on, adjust the strap to fit snugly, but not too tight.
 - o The foot should extend past the back of the boot heel. The fin's upper lip should line up with your customer's instep.
 - o If the foot goes too far forward in the pocket, the fin is too big.
- Full-foot fin: the fins should fit snugly, but your customer shouldn't have to struggle to put the fins on.
 - o A fin keeper, also known as a fin support, will help the fin from slipping off the foot if it is a bit too big.

Advise your customer about **fin care:**

- Rinse in fresh water
- Dry before storing
- Store out of direct sunlight, in a cool, dry place. Heat can warp the fins.
- Fins shouldn't be stored on the tips, which could distort
- Keep out of contact of oil, aerosol, chemical solvents, etc. that could erode or degrade the fins.

Allergies

Latex is found in rubber products and consumers who suffer should wear something between their fins and skin. Neoprene is usually recommended as an alternative for people who suffer from latex allergies and a neoprene bootie or sock would therefore help a customer allergic to latex.

While neoprene is a type of rubber, allergic reactions to neoprene are far less common than to latex. The allergic reaction is often to the type of glue used, which is less of a problem the higher quality the product.