

What is an Internal Frame Pack?

An internal frame (IF) pack is a design where the frame is contained inside the pack. Frequently, the "frame" is nothing more than two aluminum, plastic fiberglass or composite "stays" that run vertically from the top to the bottom of the pack. In more advanced packs a rigid frame sheet is incorporated. They provide the primary means of support for the shoulder straps and hip belt, and some basic structure to hang the pack from.

So what is the IF pack style? An IF pack always includes a large integral compartment on the bottom for your sleeping bag. This provides greater protection from the weather (since the bag is actually inside the pack) and eliminates the chance the sleeping bag will be lost in the backcountry or gouged/damaged while traveling through brush. In wetter locations, such as canoe trips, this is a major consideration and benefit.

There are generally fewer pockets on the outside of an IF pack, but many more lash points to attach equipment. This is likely to compensate for the loss of lash points that might have been provided by an external frame. Often, extra pockets can be purchased separately, and are often fully detachable. Many IF packs also utilize "compression straps" designed to compress the pack if it is not fully loaded. Whereas the EF pack provides a rigid frame on which to hang the pack, IF pack structure is often provided by the gear inside the pack. If the pack is not fully loaded, the compression straps eliminate the extra space by compressing the entire load into a smaller, tighter package.

Since the sleeping bag compartment is integral with the pack itself, IF packs are larger in appearance and heavier. Since the pack is carried right against the back, it is generally hotter to carry in the summer, but easier to balance. Regular users of IF packs may actually find these packs to be "over padded", and some designs allow the user to remove lumbar padding and other padding on the back. Others may find the padding an added benefit and comfort.

IF packs also carry lower on the back, which increases balance further and minimizes your chances of catching the top of the pack on branches. Manufacturers have incorporated a variety of design enhancements such as quick-wicking fabrics and "ribbed" padding designs to help in making the pack cooler to carry. And since the entire pack is carried against the back, there is a greater surface area involved in transferring weight between the pack and body. On EF packs, the weight is typically carried at only three to five points on the pack frame. With IF packs, you get a better sense that the pack is "draped" over your body, almost as if you're carrying someone on your back.



What is an External Frame Pack?

An external frame (EF) pack is a design where the frame is fully exposed on outside of the pack, and the pack itself is attached to the sides of the frame using straps, aluminum pins, or other methods. The frame material of choice is aluminum, mainly due to its light weight, though there are variations. The Coleman Peak 1 pack frame is constructed entirely of plastic, which provide a significant amount of flexibility while walking. The pack, straps, and hip belts are attached to the frame using buckles slid through holes on the frame providing a maximum amount of adjustability. Meanwhile, the basic Camp Trails frames are straight welded aluminum affairs with aluminum cross-members. Some of these designs utilize plastic separators between the cross members that allow the shoulder straps to be adjusted up or down to compensate for various torso lengths.

Frames are generally slightly curved in a gentle S-shape down the sides, with cross members attaching the two sides together. Some frame designs also utilize a "lip" or shelf on the bottom, which enables the pack to stand on it's own when put on the ground and provide greater protection against unknowingly losing a sleeping bag if it's not lashed securely to the frame. The frame generally separates the pack from the back by an inch or so. Since there is ample room for air to circulate between the back and pack, EF packs are generally considered to be "cooler" to carry in warm weather, with the minor downside being that their greater distance from the back can also make them marginally harder to balance on your back.

Some frames may also include a cross member that extends beyond the top of the pack. This "extension" can be used to lash extra equipment on top of the pack, or make it easier to remove the pack from your back by providing another grab point to lift the pack off your back. The downside of the frame extension is that it can get caught on trees and branches when traveling off-trail. Even on-trail, some trail maintainers frequently forget to clear enough headroom for tall hikers, which can increase your chances of hitting branches. And during rainy or snowy conditions, branches can be weighted down. A frame extension can give you a cold or frosty shower if branches are hanging low overhead. Once again, it's a trade-off. Do you want more options to attach gear on the outside and make it easier to remove the pack, or travel "more compactly"?

