



# Creating custom uplift

## Njord NB (Nano Buoyancy)

Trelleborg developed an off-the-shelf range of subsea modular buoys, called Njord NB (Nano Buoyancy), for moderate subsea uplift. Suitable for subsea equipment installation, each buoy core varies in density to suit individual project water depth needs. By simply adding or removing individual units from the nested flotation stack, uplift can easily be adjusted.

Njord NB (Nano Buoyancy) are engineered to offer a durable, short lead time option to complete our range of subsea buoyancy solutions. The unique nesting design of the individual buoyancy elements enables them to quickly assemble into a rigid structure with a specific uplift. The assemblies are held together and handled by using soft slings. The slings have numerous benefits including corrosion resistance, ease of handling, and no loss of buoyancy when compared to metal hardware. These soft slings are available for all assemblies to quickly and easily secure a nested buoyancy structure together for deployment.

Available in Njord NB and Njord NB-HP, both options are offered in a full depth range for maximum design versatility and are easily deployed strings of buoyancy elements. Nano buoys are manufactured from a combination of low density glass fiber macrospheres and syntactic foam, NB-HPs are

manufactured from a low density carbon fiber macrosphere and syntactic foam. The core is then encapsulated in a high density polyethylene shell for impact and abrasion protection needed for the harsh offshore environment. Nano Buoy assemblies are available at depth ratings from 1,000 to 4,000 meters.

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## Benefits:

- Nesting design
- Easy to use slings
- Durable rotomolded shells
- Long life

## Applications:

- Pipeline sleds
- Jumpers
- Suspended moorings
- Offshore installations

The table below illustrates the uplift generated for a depth rating of 1,000 meters for a standard Njord NB:

Assemblies	Depth Rating (M)	Standard Buoyancy (lbs +/- %5)	Upper Weight Limit (lbs)	Lower Weight Limit (lbs)
2 Ends	1000	169	162	146
2 Ends + 1 Mid	1000	262	262	236
2 Ends + 2 Mid	1000	355	361	326
2 Ends + 3 Mid	1000	449	460	416
2 Ends + 4 Mid	1000	542	559	506
2 Ends + 5 Mid	1000	635	658	596



## Contact Us

Trelleborg's Applied Technologies division is an industry expert in delivering innovative and reliable solutions that maximize performance for our customers. Our vast range of specialized, customizable materials ensure peace of mind at every stage of your project. With reliable and efficient project management and manufacturing we endeavor to take performance to new levels by achieving your goals safely, on time and within scope.



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