

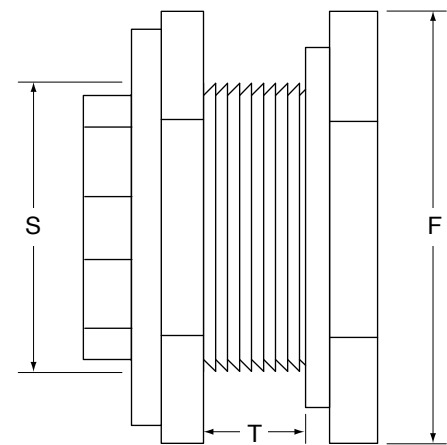
## Heavy-Duty Bulkheads

*Heavy-Duty Bulkheads* are black polypropylene fittings used to create threaded penetrations in thick-wall tanks or other surfaces. The body of a bulkhead consists of a threaded stem with a flange and a sealing gasket. The stem is inserted through a hole drilled in a rigid plastic or metal surface. A large, female-threaded nut screws onto the stem, compressing the gasket against the tank to make a watertight seal. Bulkhead fittings have internal pipe threads that accept male-threaded fittings from either side and are identified by the size of these internal threads: 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 3", and 4".



### DIMENSIONS

Thread Size	Stem Diameter (S)	Maximum Thickness (T)	Flange Diameter (F)
1/2"	1-5/8"	1/2"	2-3/4"
3/4"	1-5/8"	1/2"	2-3/4"
1"	2-1/4"	5/8"	3-1/2"
1-1/4"	2-1/4"	5/8"	3-1/2"
1-1/2"	3"	3/4"	4-1/2"
2"	3-1/4"	3/4"	4-1/2"
3"	4-1/2"	1-3/4"	6-5/8"
4"	5-3/4"	2"	10"



### INSTALLATION

Bulkheads must always be installed on flat surfaces, never on curves. The material thickness must be less than the Maximum Thickness (T). Drill a hole slightly larger than the Stem Diameter (S) using a hole saw mounted in a drill equipped with a side-handle. De-burr the edges of the hole and insert the male part of the bulkhead with the sealing gasket positioned against the flange. If the surfaces are smooth, the bulkhead can be inserted from either side. Tighten the nut with a strap wrench or large adjustable wrench, holding the stem with a second wrench. Do not use metal wrenches with teeth since they leave grooves that can lead to stress cracking.

