



GENERAL PRODUCT SHEET

Inflatable Casing Annulus Packer (CAP) – ISO 14310 Qualified

PRODUCT DESCRIPTION:

The Casing Annulus Packer (CAP) is run as an integral part of the casing string and inflated to provide an annular seal between the casing and open hole or previous casing string. It can be inflated by applying pressure to the casing after a plug bump or by using an inflation tool run on pipe. The CAP is constructed utilizing the unique TAM slat element, a fully reinforced design mounted on a pup joint of API casing with threads and weight matching the casing string. CAPs range from 1.90 in. to 20 in. (48 mm to 508 mm) with seal lengths from 3 ft to 20 ft (0.9 m to 6.1 m). In addition to the standard range, TAM is able to design, verify, and manufacture special customer-specific products.

CAPs are superior for a wide variety of applications where a seal is required between the casing and open hole (or previous casing string). CAPs can inflate to greater than 2.5 times their run-in diameters. A CAP can be inflated by straddling the inflation port or by simply applying pressure to the entire casing string. Customers may supply premium threaded pup joints of their casing to TAM and have the inflatable CAP built on their pipe. This maintains complete integrity and traceability in their casing string, especially for critical well completions using exotic metals. The greatest advantage is that CAPs enhance customer flexibility in planning a completion.

PROVIDE SOLUTIONS FOR:

- Two-stage cementing
- Annular gas migration
- Wellbore compartmentalization
- One trip, off bottom cement operations
- Annular isolation for multi-stage fracture treatments
- Water shut off or cement squeeze in open hole

FEATURES:

- Two distinct constructions:
 - The TAMCAP and LONGCAP products use high-strength stainless steel slats to reinforce the full length of the inflatable element from 3 ft to 10 ft
 - The XTRACAP product is partially reinforced the full length of the inflatable element from 5 ft to 20 ft, enabling the element to seal in irregular-shaped wellbores
- The reliable SafeLok™ inflation valve system can be run above or below the inflation element
- The Deadbolt™ SafeLok valve system can be run to provide security in extreme environments
- Ultra-slim designs are available for tight downhole applications
- Smart well completion features are available on request

BENEFITS:

- Constructed using a one-piece casing mandrel
- No hidden internal connections
- No welding to the casing mandrel during construction
- SafeLok valve system
 - Maintains casing string integrity
 - Provides delayed opening
 - Deadbolt™ valve maintains casing integrity in low pressure zones

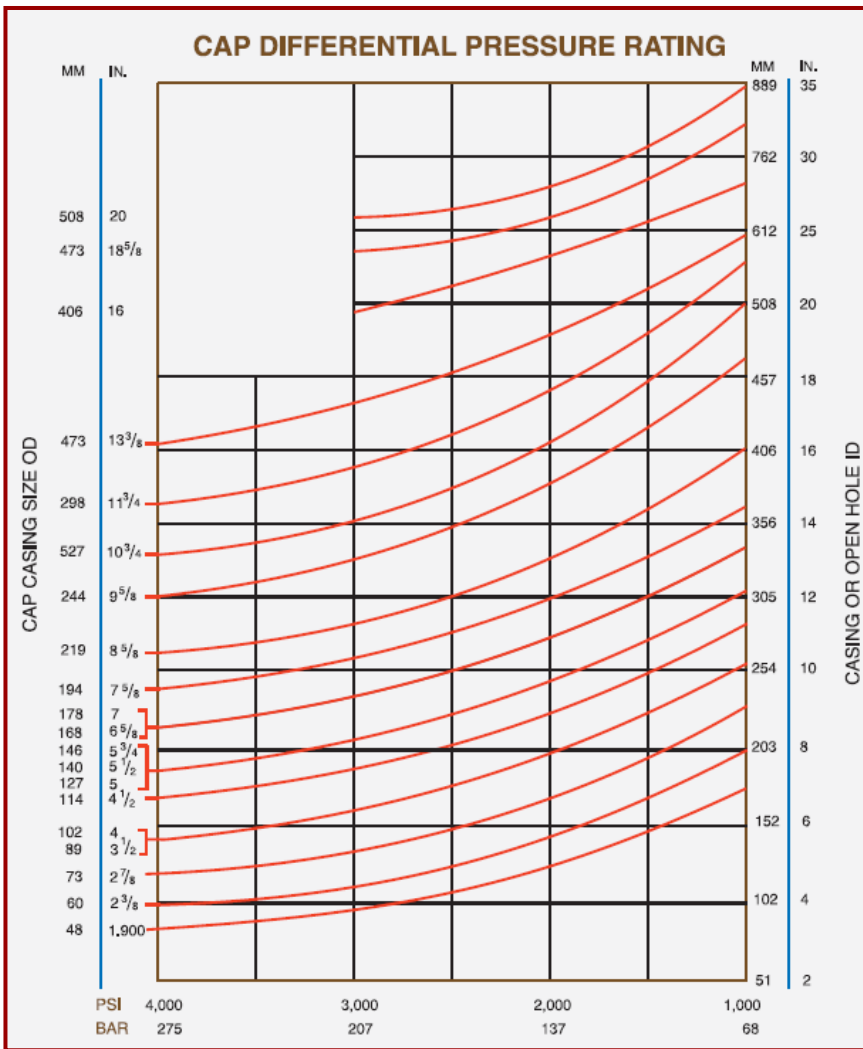




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TOOL SIZE AND DIFFERENTIAL PRESSURE RATING:

Use the chart by drawing a horizontal line from the casing or open hole ID on the right side of the chart to intersect the curve corresponding to the selected CAP casing size (OD). Drawing a vertical line to the bottom of the chart from the intersection defines the rated working pressure of the CAP. If anticipated differential pressures exceed the rated working pressure, the CAP must be inflated with a solidifying fluid such as cement, or operations must be changed to reduce the applied differential.



Casing Size		Element Outside Diameter	
(in.)	(mm)	(in.)	(mm)
1.90	48	3.06	78
2.38	60	3.50	89
2.88	73	4.00	102
3.50	89	4.63	118
4.00	102	5.13	130
4.50	114	5.56	141
5.00	127	6.06	154
5.50	140	6.56	167
6.63	168	7.69	195
7.00	178	8.06	205
7.63	194	8.75	222
8.63	219	10.25	260
9.63	244	10.88	276
10.75	273	12.75	324
11.75	298	13.75	349
13.38	340	15.25	387
16.00	406	18.50	470
18.63	473	20.63	524
20.00	508	23.00	584