

Primary Cementing Equipment



About ACC Corporate

Founded in 1992, ACC Corporate has been providing our services to the resources industry and Oil & Gas sector with great success. We attribute this to our team's dedication to customer service and our extensive industry experience.

Throughout our journey we have attracted and developed a highly experienced team of professionals to ensure the effective development and management of our products and services. This includes a management team with track record in the industry along with a highly qualified team of field technicians who are actively working with operators in challenging offshore and onshore environments.

Our portfolio of products has grown over the years to cover numerous well and process related service and construction equipment. Our point of distinction has always been our fast response to demands and the ability to adapt our offerings to comply with the variety of different requirements we encounter-then supply these on time with a competitive price.

We thank you for giving us the opportunity of being at your service and our team is always available 24/7 to assist you whenever you contact us.

Primary Cementing Equipment

ACC Corporate has been supplying Primary Cementing Equipment to the Australian Oil and Gas Industry for over 20 years.

With MARKSMEN Primary Cementing Equipment, you will complete your well with confidence that you'll have the correct cement placement and tubular standoff. Correct selection of cementing accessories reduces the need for secondary cementing, ensuring tubulars get to target depth, achieve optimum circulation and reducing risk of differential sticking.

MARKSMEN Primary Cementing Equipment is manufactured to the highest standard by our API 5CT and API 10D qualified partners, with a high emphasis on QAQC, excellence in delivery and competitive pricing.

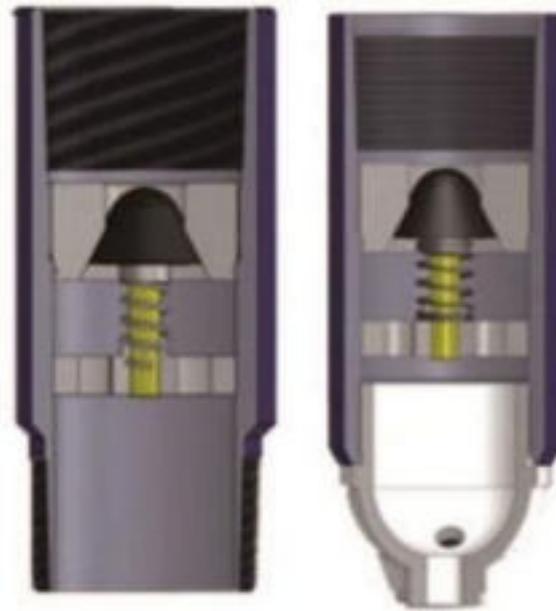
Available in all casing and hole sizes, we will match your conditions with the material required and supply the best service

ACC Corporate is proud to present the Marksmen range of Primary Cementing Equipment

Contents

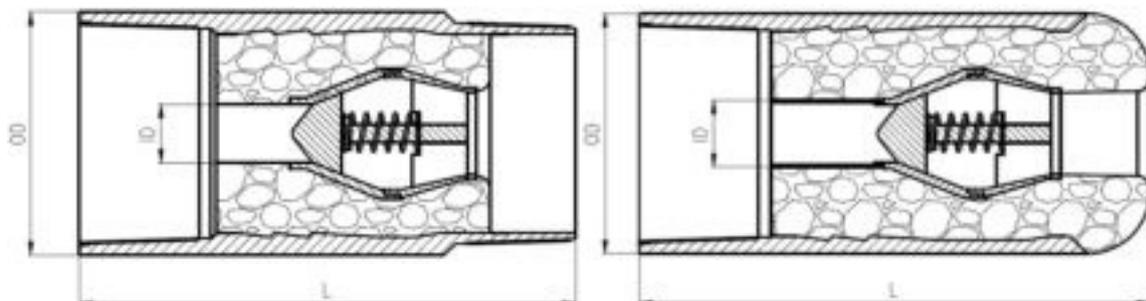
PRIMARY CEMENTING EQUIPMENT	2
FLOAT EQUIPMENT	3
SHOES / COLLARS	3
STAB IN FLOAT SHOE AND COLLAR	5
REAMER SHOE	6
CEMENT PLUGS	6
CONVENTIONAL PLUGS	6
NON-ROTATING PLUGS	7
CASING STAND-OFF PROGRAMMING	8
CENTRALISERS	9
SINGLE PIECE CENTRALISERS.....	10
STAND-OFF BANDS	11
COMPOSITE CENTRALISERS	12
STOP COLLARS	13
CEMENTING BASKETS	14
STAGE CEMENTING COLLARS	15
MECHANICAL STAGE COLLAR	15
HYDRAULIC STAGE COLLAR	16

FLOAT EQUIPMENT



Float equipment is essential for preventing back-flow whilst pumping cementing job to cement casing into place in the wellbore, as well as providing a landing seat for cement wiping/displacement plugs. MARKSMEN float equipment is manufactured to the highest quality specifications and meets or exceeds the highest API standards.

SHOES / COLLARS



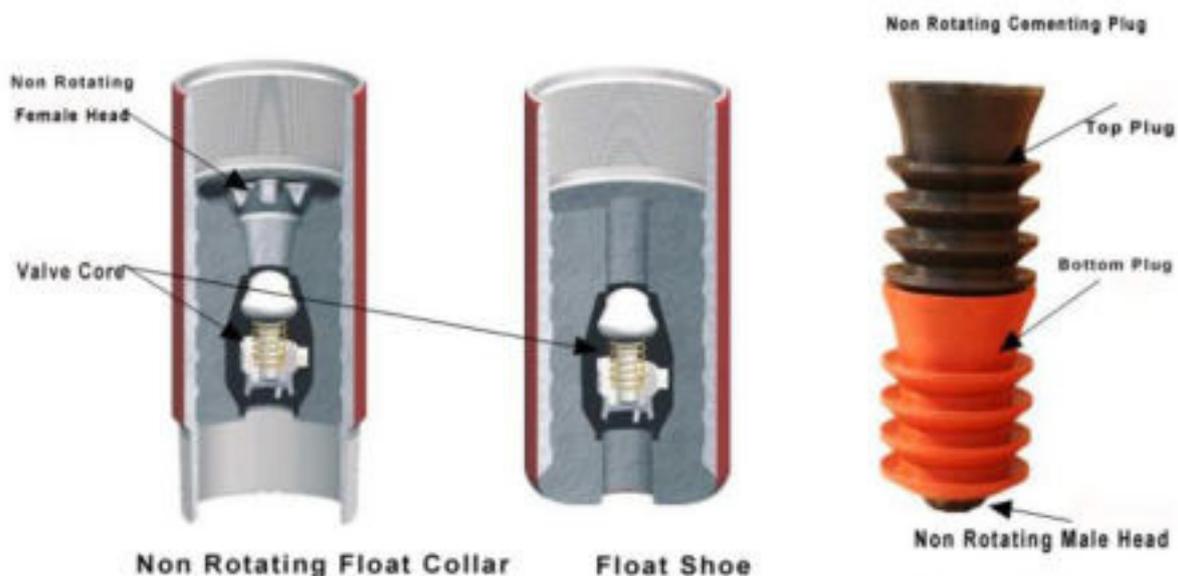
Float shoes and collars contain a backpressure valve that prevents fluids from entering the casing while the pipe is lowered in the hole and prevents cement from flowing back into the casing after placement, while enabling circulation down through the casing.

Float collars are usually placed one to three joints above the float/guide shoe. They provide a seat for the cement plugs, the bottom plug pumped ahead of the cement and the top plug behind the full volume of slurry. Once seated, the top plug shuts off fluid flow and prevents over-displacement of the cement. The space between the float shoe and the float collar provides a containment area to entrap the likely-contaminated fluids from the wiping action of the top cementing plug, securing the contaminated fluid away from the shoe where a strong cement bond is of primary importance. Float collars include a backpressure valve and serve basically the same function as the float shoe.

Features:

- The aluminium Alloys used in this product are PDC Drillable.
- Available in standard 4-1/2" ~ 20" sizes. Customised sizes are also available.
- Applicable for use in all applications from close tolerance liners to full casing strings.
- Standard float shoe is provided with round cement nose to deflect off ledges or obstructions.
- Customizable options including nose types, ports/jets, and ball deflector. Double valve or single valve option.

Non-Rotation style is available (pictured below) which engages the plug in the Collar and locks the rotation of the plug during drill out.



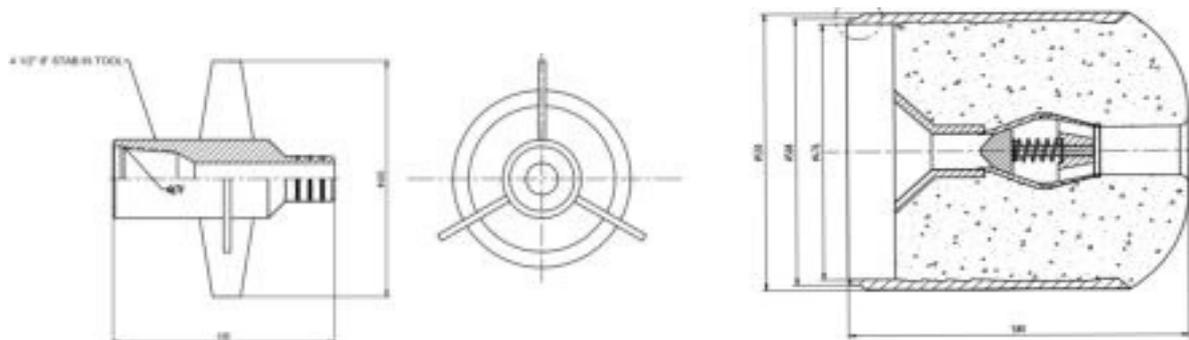
STAB IN FLOAT SHOE AND COLLAR

Stab-in float collar and shoe is an improved method for cementing large diameter casing. Conventional methods require excessive amounts of cement to ensure cement circulation to surface because of open hole volume, losses to the formation, or mud displacement efficiency that can't be determined with sufficient accuracy.

With a Stab-in float collar and shoe, the Drill Pipe is stabbed directly in the Float Shoe or Collar and cement is pumped through the drill pipe until the returns reach surface. Cement is then displaced to the bottom of the Drill Pipe via use of a wiper ball or dart. Drill Pipe is then picked up circulated clean and pulled out of the hole.

Features:

- Small diameter inner string of Drill Pipe is used to displace the cement which minimizes displacement volume behind Cement and there by reduces contamination and save time.
- Drill out of cement inside large casing is minimized by controlling cement operation with displacement fluid in Drill Pipe and plunger valve in Stab in Shoe.
- Improve displacement accuracy – cement mixing and pumping continues until cement returns reach surface.
Better cement quality – the reduced cement / mud interface area and high velocity of flow in the Drill Pipe minimize cement contamination while the short pumping time eliminates the need for cement retarders.
- Reduce cement volume – Conventional displacement requires calculation of excess cement factor, whereas with Stab-in methods excess cement need be no greater than the volume of the Drill Pipe. No large plugs required.
- Reduce rig time – Circulating, pumping and drill-out times are minimised.
- Double valve and single valve option.



REAMER SHOE



Designed for problematic wells where reciprocation and/or rotation of the casing is anticipated to ream the hole and land the casing to TD. Standard features include aluminium eccentric nose with integral down jets, and side ports. Blades are coated with tungsten carbide cutting structure and height customised for hole size. The Reamer Shoe is available in sizes 4-1/2" ~ 13 5/8".

CEMENT PLUGS

CONVENTIONAL PLUGS



A rubber cement plug is used to separate the cement slurry from other fluids, reducing contamination and maintaining predictable slurry performance. Two types of cementing plugs are typically used on a cementing operation. The bottom plug is launched ahead of the cement slurry to minimise contamination by fluids inside the casing prior to cementing. A diaphragm in the plug body ruptures to allow the cement slurry to pass through after the plug reaches the landing collar. The top plug has a solid body that provides positive indication of contact with the landing collar and bottom plug through an increase in pump pressure.

Features:

- Manufactured of graded rubber that is fused upon a composite or aluminium core.
- PDC drillable.
- Operating range of up to 200-degree F.
- Customised plug can be ordered for higher operating temperature and operation in either synthetic or mud fluids.
Available in Standard 4-1/2" ~ 20" size and can be manufactured for any special size order.

NON-ROTATING PLUGS



Cement plug rotation during drill out has led to untold hours of expensive rig time. MARKSMEN Non-Rotating Type cementing plugs require only a tenth of the time (using PDC bits) to drill out the shoe joint. Innovative design includes plugs that have locking teeth on both the top and bottom plug and super seal float collars that allow plugs and casing equipment to lock together during drill out.

Non-Rotating cementing plugs also are equipped with high strength drillable plug inserts designed to withstand casing test pressures after the job is completed.

Features:

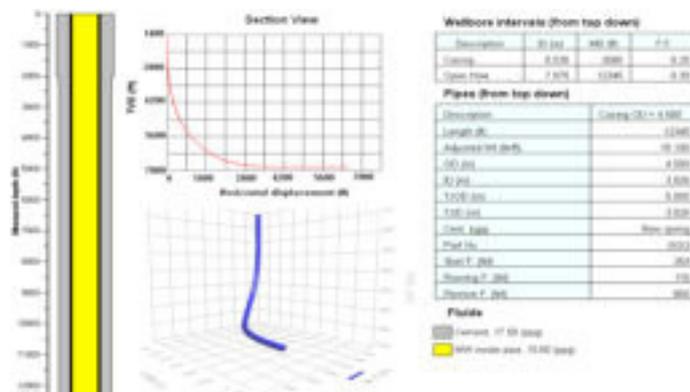
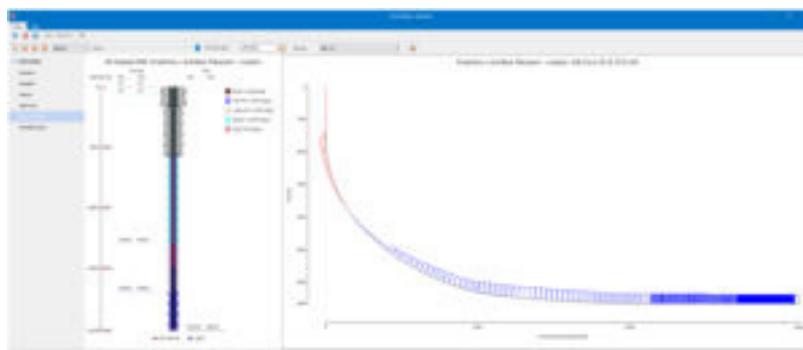
- Designed to decrease drill out time.
- This series of cementing plugs have reinforced locking teeth built into the plugs, which lock together between the plugs and the float equipment to eliminate rotation of the plug during drill out.
- These plugs are made of graded rubber with aluminium or phenolic core inside, no other metal parts are used.
- Completely PDC drillable.
- Operating range of temperature with aluminium core is up to 200-degree F.
Available in Standard 4-1/2" ~ 20" size and can be manufactured for any special size order.

CASING STAND-OFF PROGRAMMING

ACC utilises the expertise of technical software suite available from Pegasus Vertex Inc. to run drilling software programs such as CentraDesign, to ensure your Casing Centralisation plan is perfectly executed. Features and Benefits of utilising this software:

- Optimize centraliser placement
- Predict casing standoff
- Predict Torque and drag for ERD or deviated wellbores
- Sensitivity analysis on spacing
- Tripping animation
- Casing Flotation

Below images are snapshots of the programming being performed by pvsoftware.



CENTRALISERS



Casing Centralisers are an essential part of the casing program for the exploration and production of oil and gas fields. They ensure the correct stand-off and therefore annular clearance, reducing friction/drag by preventing differential sticking, allowing the operator to run their shoe track to target depth reliably in all conditions.

MARKSMEN Centralisers meet or exceed API-10D specifications where applicable for starting, running, and restoring force criteria.

Where tight restrictions are likely in the well design a rigid centraliser may be chosen, and solid slip-on centralisers are preferred for reciprocating casing runs. Hinged Bow Spring centralisers are easy to install and can be installed mid-joint or across couplings. Stop collars are used to anchor the centraliser while still allowing rotation of the casing string.

BOW SPRING CENTRALISERS



Hinged bow spring centralisers are a traditional and economic centralizer, this kind of centraliser is used in general vertical or slightly deviated wells. With a low starting force and high restoring force, they are widely used in oil and gas drilling.

These centralisers are customisable, with the bow height adjustment used to increase or decrease restoring force.

BENEFITS

- Centralizes Casing in the Wellbore.
- Provides Reinforcement to the Cement Column.
- Minimizes Differential Sticking.
- Allows for Reciprocation or Rotation of Casing.

OPTIONS

- Manufactured in all Common Casing and Hole Sizes,
- Welded and Non-Welded.

SINGLE PIECE CENTRALISERS

Single piece centralisers perform well in both open and cased hole. Our high-quality single piece centralisers are designed and tested to meet or exceed API-10D specifications.

Single piece centralisers combine the highest restoring force with low starting and running force and is particularly useful in positioning the casing in a deviated or horizontal well.

BENEFITS

- Minimal Weak Points
- Maximises Stand-off while Minimising Drag
- Highest Restoring Force
- Low Starting and Running Force

OPTIONS

- Available in 4 ½" to 20"
- Integral Set Screws



STAND-OFF BANDS



Solid and Semi-Solid Stand Off bands are used for maximizing stand-off to aid successful cementing in highly deviated, deep, or horizontal wells.

The spiral steel vane with 360o overlap ensures high turbulence around the centralizer while providing an optimum flow area. Tapered vanes reduce drag and give strong stand-off while reciprocating the casing string. BENEFITS

- Positive Stand-off
- Optimal Fluid Flow
- Ideal for Reciprocating

OPTIONS

- Solid Centraliser
- Semi-Solid (Pressed) Centraliser
- Integral Set Screwed or Stop Collared
- Steel/Aluminium

COMPOSITE CENTRALISERS



Made of an advanced Composite, the MARKSMEN Composite Centralisers are favoured where the friction coefficient needs to be low, and/or where buoyancy of the casing string can have advantages for getting to a more distant horizontal TD. Rollers are perfect for tubing runs

BENEFITS

- Light and easily handled
- Positive Stand-off
- Buoyant
- Heat resistant

OPTIONS

- Rollers
- Vanes can be optimised for turbulence
- Fully Modifiable Moulding

STOP COLLARS



Various techniques are used to anchor centralisers to the casing string.

Where the Drilling Engineer requires the centralisers to be off-joint, Stop Collars are used.

Stop collars are run to attach the centralisers to the casing string either mid joint, top, or bottom of the joint as called for in the well design.

BENEFITS

- Fasten the Centraliser
- Allows Rotation
- Easy to Install – Lanyards on Tools!

OPTIONS

- Bolted
- Nailed
- Lock Screwed
- Wipers and Scratchers
- All OCTG Sizes

CEMENTING BASKETS



The Cementing Basket is an isolation device used to suspend the cement and protect from cement displacement and settlement through the drilling fluids.

Especially useful where a low fracture gradient exists or a cement top-up is expected, the cementing basket will ensure the annulus is full of cement where possible, making zonal isolation expectations more certain for your well, notably if weak ground formations are present.

BENEFITS

- Microannulus avoided.
- Well integrity
- Can Replace an External Casing Packer

OPTIONS

- Open or Closed Top
- Lock Screwed
- Sizes 4 ½" to 20" in various hole sizes

STAGE CEMENTING COLLARS

Mechanical Stage Collar



Mechanical Stage Collar allows cementing of casing string in two stages. These collars set the standard for reliability, cost effectiveness, and ease of use with outstanding built-in features and quality. They are the collars of choice when drilling requirements call for proven technology and low risk. The compact, simple design minimises the number of moving parts and makes the tools easier to handle.

The collar's clear opening and closing indications at the surface accommodate the hydraulic conditions of the well for safer, more efficient operations. The internal sleeves increase reliability and prevent premature opening from formation restrictions on applied pressures.

It reduces total pumping pressure in long casing strings.

FEATURES:

- Short body, complete stress is small.
- Special bypass design solving the liquid compression between opening dart and closing plug.
Lock ring design ensures permanently closed after completion.

Hydraulic Stage Collar



Hydraulic stage collar meets the challenges of cementing holes at any angle with a hydraulically opened port system. Stage collar designed specifically for horizontal completion. It is specifically used for Primary Cementing in deep vertical or high deviated horizontal well conditions.

It reduces total hydrostatic pressure on weak formations to prevent lost circulation during cementing. Clear surface indications of opening and closing pressures provide safer and more efficient operations.

The opening pressure of the stage collar can be adjusted at rig site to meet well requirements, providing operational flexibility.

FEATURES:

- Minimum volume and easy drilling parts design.
- Special bypass design solving the liquid compression between opening dart and closing plug.
- Lock ring design ensures permanently closed after completion.

ACC Corporate

An ISO 45001 & ISO 9001 Certified Company

Head Office

4 Roy Street, Welshpool WA 6106, Australia



MARKSMEN PRIMARY CEMENTING EQUIPMENT



+61 8 9470 5070 (24 hours)

sales@acc-corporate.com

www.acc-corporate.com

