

# ***CEMENTING TOOLS***

## **Float Shoe and Float Collar**

The Float Collars and Float Shoe are used to guide the casing to be put into the hole. It can adjust the floating power of the casing when the casing been laid in. That's can certify the qualification of the cementing. The Float Collars and Float Shoe manufactured by using the Spring Driving back-pressure valve type. It has a high reliability.

The structures are similar between Float Collar (Fig.1) and Float Shoe. The lower end of the Float Collar is the pin connection which is connected with the casing. The upper end which is used for filling the cement has a cinqfoil hole which can avoid the twist.

The material of the Float Shoe(Fig.2) body is the alloy steel. The upper end of the Float Shoe is connected with casing and its lower end is connected with the semilunar cement head. You can use the guide casing to lay it into the drilling hole. There is a back-pressure valve in the Float Shoe. You can use the oil well cement to fill the area between the Float Shoe and the body. The back-pressure can be cut by back-pressure valve. The upper hole and the lower hole will be open when the products after done. After the pressure of the circulating mud press the Valve Head into the lower place, the three collar valve on the valve tail will fall down automatically. The valve will press the valve seat tightly at the function of spring after the cement injection. And it will as a one-way valve function in the working. At that time, you could inject the mud into the pump from the upper end to the lower end, but the liquid of the well won't be back in the casing below the valve or the outside circulation area of the casing.



Rubber plug (Fig.3) is in the function of apart the well liquid and cement and the function of knock and press. The Rubber Plug is divided into the upper plug and the lower plug. Its main feature is it can be drilled by PDC Drill Bit.



Fig.1 Float Collar



Fig.2 Float Shoe



Fig.3 Rubber Plug

Specification (in)	O.D. (mm)	Total length (mm)	I.D. (mm)	Min.Dia. (mm)	Conn Type	Affordable strength of back-pressure (Mpa)	
Float Collar	5	141.30	500	110	50	5 BCSG	35
	5 1/2	153.67	530	112	55	5 1/2BCSG	35
	7	194.46	586	162.5	77	7 BCSG	35
	9 5/8	270	720	225	77	9 5/8 BCSG	35
	13 3/8	365	720	319	77	133/8 BCSG	35
	20	533.4	720	475	77	20 BCSG	35
Float Shoe	5	140.30	495	110	50	5 BCSG	35
	5 1/2	153.67	514	122	55	5 1/2 BCSG	35
	7	194.46	533	162.5	77	7 BCSG	35
	9 5/8	269.88	550	225	77	9 5/8 BCSG	35
	13 3/8	339.7	550	319	77	133/8 BCSG	35
	20	534	652	475	77	20 BCSG	35

# Single and Double Plug Cement Head

## ● Casing Cement Head with Single Plug

It is a special tool for pumping slurry and releasing plug.

Feature:

1. Quick-latch adapter is used to provide easier, faster and safer thread connection with API STC/LTC cementing casing.
2. Indicator shows plug releasing.
3. Balance pipe is developed.



Type	DDS				ZDS		
Size.(mm)	139.7	177.8	244.5	339.7	73	88.9	127
Overall length(mm)	1400	1450	1700	1700	910	1012	1125
Manifold interface	2"union						
I.D of plug container(mm)	125	160	225	320	52	72	100
Length of plug container (mm)	450	450	550	550	290	340	405
Mpa.	70	35	35	20	70	70	35

## ● Casing Cement Head with Double Plugs

The casing cement-head with double plugs (called as cement-head) is a common cementing tool used as wellhead unit in all kinds of cementing operation. Comparing to cement-head with single plug, it owns longer cement-head body, and upper rubber plug and lower rubber plug can be put in at same time.

The tool owns some advantages such as simple construction, easy operation, high pressure resistant, manifold in common use, flexible in connecting. Especially, the lever type indicator can shows whether rubber plug goes through double plugs cement-head to enter casing so that operator can determine easily.



Type	ST35-140	ST35-178	ST35-140	ST35-140
Size	139.7(5 1/2")	177.8(7")	244.5(9 5/8")	339.7(13 3/8")
Max.working pressure	35Mpa	35Mpa	35Mpa	20Mpa
Casing coupling thread	5 1/2" LTC/BTC	7" LTC/BTC	9 5/8" LTC/BTC	13 3/8" LTC/BTC
Manifold interface	2" union	2" union	2" union	2" union
ID of plug container (mm)	125	160	225	320
Length of plug container (mm)	450	460	560	560
Overall length	1886	1972	1701	2210