



## Annulus Pressure Device

The Annulus pressure device is used in TCP to transfer the annulus pressure into tubing pressure. It suits for deep well, deviated well and horizontal well.

### Features

- ※ Not affect the testing or product channel.
- ※ Can be used in perforating and testing combine operation.
- ※ Can be used with TCP pressure activated firing system and differential firing head assy.

### Main Technical Parameters

Model		HgMp-8	HgMp-8B	HgMp-8E	HgMp-8J
O.D.		φ93mm	φ154mm	φ93mm	φ114mm
Length	Pressure Sub	196mm	310mm	196mm	206mm
	Filter Sub	196mm	310mm	174mm	195mm
Pressure Tolerance		60MPa	60MPa	60MPa	60MPa
Area of Filter Sub		1800mm <sup>2</sup>	1800mm <sup>2</sup>	1800mm <sup>2</sup>	1800mm <sup>2</sup>
Thread of Pressure Sub	Upper End	2-7/8 EUE(B)	4-1/2 IF(B)	2-3/8 EUE(B)	3-1/2 EUE(B)
	Bottom End	2-7/8 EUE(P)	4-1/2 IF(P)	2-3/8 EUE(P)	3-1/2 EUE(P)
Thread of Filter Sub	Upper End	2-7/8 EUE(B)	4-1/2 IF(B)	2-3/8 EUE(B)	3-1/2 EUE(B)
	Bottom End	2-7/8 EUE(P)	4-1/2 IF(P)	2-3/8 EUE(P)	3-1/2 EUE(P)

## Glass Disc Sub

Glass disc sub is used in perforating to prevent the sand depositing.

### Features

- ※ Flow ports on the sub allow mud and debris to be circulated off the string.
- ※ Can run with TCP safety impact assembly or bar actuated firing heads.

### Main Technical Parameters

Model	QBZ3-30A	QBZ3-30B	QBZ3-30E
O.D.	φ93mm	φ114mm	φ78mm
Length	221mm	236mm	225mm
I.D.	φ48mm	φ72mm	φ43mm
Upper Thread	2-7/8 EUE(B)	3-1/2 EUE(B)	2-3/8 EUE(B)
Bottom Thread	2-7/8 EUE(P)	3-1/2 EUE(P)	2-3/8 EUE(P)



## Pressure Equalizing Sub

Pressure equalizing sub is used in TCP. Drop bar from well head to break impact pin to make the pressure of tubing and casing equalizing. The pressure of tubing is separated from the pressure of casing before drop bar.

### Main Technical Parameters

Model	HgMp-31A	HgMp-31B
O.D.	φ93mm	φ114.3mm
Length	221mm	236mm
I.D.	φ47mm	φ56mm
Pressure Tolerance	60MPa	60MPa
Mini.Break Energy of Impact Pin	2.655kg · m	2.655 kg · m
Upper Thread	2-7/8 EUE(B)	3-1/2 EUE(B)
Bottom Thread	2-7/8 EUE(P)	3-1/2 EUE(P)

## Pulling Tool

Pulling tool is used to fishing drop bar assembly.

### Features

- ※ Jar to break the shear pin it can separate form drop bar assembly.
- ※ Replace jackcatch bush to suit for different tube.
- ※ Used with weight bar and mechanical jar together.

### Main Technical Parameters

Model	DL-1	DL-1F
O.D.	φ36mm	φ36mm
Length	352mm	352mm
O.D. of Fishing Neck	φ25.4mm	φ25.4mm
Thread	15/16-10 UNS(P)	1 3/16-12 UNC(B)

## R/A Sub

R/A sub also named isotope sub. There is radioelement in it. It is used in perforating to located guns.

### Main Technical Parameters

Model	R/A-1	R/A-2	R/A-4
O.D.	φ98mm	φ114mm	φ80mm



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Length	230mm	235mm	225mm
Upper Thread	2-7/8 EUE(B)	3-1/2 EUE(B)	2-3/8 EUE(B)
Bottom Thread	2-7/8 EUE(P)	3-1/2 EUE(P)	2-3/8 EUE(P)

### GLB-3 Drop Bar Assembly

Drop bar assembly is used with safety impact firing head, drop bar firing head etc together to provide impact energy.

#### Main Technical Parameters

Model	GLB-3
O.D.	φ28 mm
O.D. of Roll Wheel	φ38 mm
Length	2022mm
Fishing Neck	φ19.4mm
Weight	9.7Kg