Cement Head
Circulation Head
Circulating Swage

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1. Single Plug Cement Head

- Compact structure, reasonable design and structure are made of high strength alloy steel AISI4135H, high pressure.
- The bottom of the single plug cement head has a union type of quick-latch Joint for easy and casing to connect.
- Plug Dropping Indicator is used to indicate the whereabouts through the cement head into the casing.
- Cement head cap and the body connecting thread, as well as quick-latch joint pitch trapezoidal screw thread are large, easy quick installation.
- Internal balance cement head: Body I.D. greater than cementing plug diameter, the internal pressure balance can be achieved.

Product No.DSC-01

Product No.DSC-02

Standard configuration No.DSC-01:

- Plug Dropping Indicator.
- Plug release Plunger Assembly.
- Quick-Latch Joint.
- Manifold, Downward union.
- Integral Plug Valve.
- The type cement heads are available in sizes 4" through 13⅜".

Standard configuration No.DSC-02:

- Plug Dropping Indicator.
- Double Plug release Plunger Assembly.
- Without Quick-Latch Joint.
- Manifold, Downward union.
- Integral Plug Valve.
- The type cement heads are available in sizes 16" through 20".

Product No.DSC-03

Product No.DSC-04

Single Plug Cement Head No.DSC-03:

- Plug Dropping Indicator.
- Plug release Plunger Assembly.
- Quick-Latch Joint.
- Integral Plug Valve.
- Integral manifold by tee and cross, no thread connection.
- The type cement heads are available in sizes 4" through 13⅜".

Single Plug Cement Head No.DSC-04:

- Plug Dropping Indicator.
- Double Plug release Plunger Assembly.
- Without Quick-Latch Joint.
- Integral Plug Valve.
- Integral manifold by tee and cross, no thread connection.
- The type cement heads are available in sizes 16" through 20".

Product No.DSC-05

Product No.DSC-06

Single Plug Cement Head No.DSC-05:

- Simple cement head.
- Plug Dropping Indicator.
- Double Plug release Plunger Assembly.
- No manifold.
- On the cover of a union.
- The type cement heads are available in sizes 4" through 20".

Single Plug Cement Head No.DSC-06:

- Plug Dropping Indicator.
- Release Plunger Assembly.
- Quick-Latch Joint. Rotate 60 °
- Integral Manifold.
- Integral Plug Valve.
- The type cement heads are available in sizes 4" through 20".

Product No.DSC-07

Product No.DSC-08

Single Plug Cement Head No.DSC-07:

- Plug Dropping Indicator.
- Plug Release Plunger Assembly.
- Integral Plug Valve.
- Thread connection manifold, union port level.
- The type cement heads are available in sizes 4" through 13⅜".

Single Plug Cement Head No.DSC-08:

- Simple cement head.
- No manifold.
- Plug Dropping Indicator.
- Release Plunger Assembly.
- Quick-Latch Joint.
- The type cement heads are available in sizes 4" through 13⅜".

Product No.DSC-09

Product No.DSC-10

Single Plug Cement Head No.DSC-09:

- Plug Dropping Indicator.
- Double Plug release Plunger Assembly.
- Plug valves threaded connection
- Manifold, Downward union.
- Quick-Latch Joint.
- The type cement heads are available in sizes 4" through 13⅜".

Single Plug Cement Head No.DSC-10:

- Plug Dropping Indicator.
- Release Plunger Assembly.
- Manifold, Downward union.
- Plug valves threaded connection
- The type cement heads are available in sizes 16" through 20".

Product No.DSC-11

Product No.DSC-12

Single Plug Cement Head No.DSC-11:

- Simple cement head.
- Plug Dropping Indicator.
- Plug release Plunger Assembly.
- Plug valves threaded connection
- Manifold, Downward union.
- The type cement heads are available in sizes 4" through 13⅜"..

Single Plug Cement Head No.DSC-12:

- Release Plunger Assembly.
- Complex manifold.
- Integral Plug Valve.
- Pressure gauges, flow meter.
- The type cement heads are available in sizes 4" through 20".

Single Plug Cement Head Main Technical Parameters

Specifications，mm	Working Pressure Psi	I.D. of Plug Container, mm	Length of Plug Container, mm
4" (Φ101.6mm)	5000，7150	Φ102	425
4½" (Φ114.3mm)	5000，7150	Φ115	425
5" (Φ127mm)	5000，7150	Φ127	425
5½" (Φ139.7mm)	5000，7150	Φ140	425
5¾" (Φ146mm)	5000，7150	Φ146	425
6⅝" (Φ168.27mm)	5000，7150	Φ168	425
7" (Φ177.8mm)	5000，7150	Φ178	425
7⅝" (Φ193.67mm)	5000，7150	Φ194	425
7¾"(Φ196.85mm)	5000，7150	Φ197	425
7⅞"(Φ200.03mm)	5000，7150	Φ200	425
8⅝" (Φ219.1mm)	5000，7150	Φ219	425
9⅝" (Φ244.5mm)	5000，7150	Φ245	425
9⅞" (Φ250.83mm)	5000，7150	Φ250	425
10¾" (Φ273mm)	5000，7150	Φ273	425
11¾" (Φ298.45mm)	3000，5000	Φ298	425
12¾" (Φ324mm)	3000，5000	Φ324	425
13⅜" (Φ339.7mm)	3000，5000	Φ340	425
13⅝" (Φ346.08mm)	3000，5000	Φ346	425
16" (Φ406.4mm)	3000，5000	Φ406	600
16¾" (Φ426mm)	3000，5000	Φ426	600
18⅝" (Φ473.1mm)	3000，5000	Φ473	600
20" (Φ508mm)	3000，5000	Φ508	600

- API：LTC、STC、BTC.
- GOST: OTTM.
- Premium connections: Tenaris hydril, JFE, TPCQ, WSP, VAM, HUNTING, Bao Steel.

2. Double Plug Cement Head

- Compact structure, reasonable design and structure are made of high strength alloy steel, high pressure.
- The bottom of the double plug cement head has a union type of quick-latch Joint for easy and casing to connect.
- Indicator is used to indicate the whereabouts through the cement head into the casing.
- Cement head cap and the body connecting thread, as well as quick-latch joint pitch trapezoidal screw thread are large, easy quick installation.
- Internal balance cement head: Body I.D. greater than cementing plug diameter, the internal pressure balance can be achieved.

Product No.SSC-01

Product No.SSC-02

Standard configuration No.SSC-01:

- Plug Dropping Indicator.
- Plug release Plunger Assembly.
- Quick-Latch Joint.
- Manifold, Downward union.
- Integral Plug Valve.
- The type cement heads are available in sizes 4" through 13⅜".

Standard configuration No.SSC-02:

- Plug Dropping Indicator.
- Double Plug release Plunger Assembly.
- Quick-Latch Joint. Rotate 60 °
- Manifold, Downward union.
- Plug valves threaded connection.
- The type cement heads are available in sizes 16" through 20".

Product No.SSC-03

Product No.SSC-04

Double Plug Cement Head No.SSC-03:

- Plug Dropping Indicator.
- Double Plug Release Plunger Assembly.
- Quick-Latch Joint.
- Manifold, Downward union.
- Plug valves threaded connection.
- The type cement heads are available in sizes 4" through 13⅜".

Double Plug Cement Head No.SSC-04:

- Plug Dropping Indicator.
- Plug release Plunger Assembly.
- Quick-Latch Joint.
- Manifold.
- Plug valves threaded connection.
- The type cement heads are available in sizes 4" through 13⅜".

Double Plug Cement Head Main Technical Parameters

Specifications mm	Working Pressure Psi	I.D. of Plug Container mm	Length of Plug Container, mm	
			Conventional Cementing	Stage Collar
4" (Φ101.6mm)	5000，7150	Φ102	425	425
4½" (Φ114.3mm)	5000，7150	Φ115	425	425
5" (Φ127mm)	5000，7150	Φ127	425	425
5½" (Φ139.7mm)	5000，7150	Φ140	425	425
5¾" (Φ146mm)	5000，7150	Φ146	425	425
6⅝" (Φ168.27mm)	5000，7150	Φ168	425	425
7" (Φ177.8mm)	5000，7150	Φ178	425	425
7⅝" (Φ193.67mm)	5000，7150	Φ194	425	425
7¾"(Φ196.85mm)	5000，7150	Φ197	425	425
7⅞"(Φ200.03mm)	5000，7150	Φ200	425	425
8⅝" (Φ219.1mm)	5000，7150	Φ219	425	550
9⅝" (Φ244.5mm)	5000，7150	Φ245	425	550
9⅞" (Φ250.83mm)	5000，7150	Φ250	425	550
10¾" (Φ273mm)	5000，7150	Φ273	425	550
11¾" (Φ298.45mm)	3000，5000	Φ298	425	550
12¾" (Φ324mm)	3000，5000	Φ324	425	600
13⅜" (Φ339.7mm)	3000，5000	Φ340	425	600
13⅝" (Φ346.08mm)	3000，5000	Φ346	425	600
16" (Φ406.4mm)	3000，5000	Φ406	600	650
16¾" (Φ426mm)	3000，5000	Φ426	600	650
18⅝" (Φ473.1mm)	3000，5000	Φ473	600	650
20" (Φ508mm)	3000，5000	Φ508	600	650

- API：LTC、STC、BTC.
- GOST: OTTM.
- Premium connections: Tenaris hydril, JFE, TPCQ, WSP, VAM, HUNTING, Bao Steel.

3. Drill Pipe Single Plug Cement Head

- Special tool for pumping slurry and releasing plug. The ZSC Drill Pipe Single Plug Cement Head can be connected with Drill pipe.
- Compact structure, reasonable design and structure are made of high strength alloy steel, high pressure.
- Indicator is used to indicate the whereabouts through the cement head into the casing.

Product No.ZSC-01

Product No.ZSC-02

Drill Pipe Cement Head No.ZSC-01:

- Plug Dropping Indicator.
- Plug release Plunger Assembly.
- Manifold, Downward union.
- Plug valves threaded connection.
- The type cement heads are available in sizes 2⅞" through 5½".

Drill Pipe Cement Head No.ZSC-02:

- Plug Dropping Indicator.
- Plug release Plunger Assembly.
- Pitching device.
- Manifold.
- Plug valves threaded connection.
- The type cement heads are available in sizes 2⅞" through 5½".

Product No.ZSC-03

Product No.ZSC-04

Rotary Drill Pipe Cement Head No.ZSC-03:

- Plug Dropping Indicator.
- Plug release Plunger Assembly.
- Pitching device.
- Bearing, rotating easy.
- Manifold.
- Plug valves threaded connection.
- The type cement heads are available in sizes 2⅞" through 5½".

Drill Pipe Cement Head No.ZSC-04:

- Simple cement head.
- Plug release Plunger Assembly.
- No manifold.
- No plug valves.
- The type cement heads are available in sizes 2⅞" through 5½".

Product No.ZSC-05

Drill Pipe Cement Head No.ZSC-05:

- Plug release Plunger Assembly.
- Manifold.
- Plug valves threaded connection.
- The type cement heads are available in sizes 2⅞" through 5½".

Drill Pipe Cement Head Main Technical Parameters

Specifications mm	Working-Pressure Psi	I.D. of Plug Container mm	Length of Plug Container, mm	Connection Threads
2⅞"(Φ73mm)	5000，7150	Φ55	290	2⅞IF（NC31）
3½"(Φ89mm)	5000，7150	Φ72	340	3½IF（NC38）
4"(Φ101.6mm)	5000，7150	Φ90	340	3½IF（NC38）
4½" (Φ114.3mm)	5000，7150	Φ102	380	3½IF（NC38）
5"(Φ127mm)	5000，7150	Φ102	380	4½IF（NC50）
5½"(Φ139.7mm)	5000，7150	Φ115	400	FH5½

3. Circulation Head

The top of circulation head connects to the kelly, the bottom connects to the casing. It is used to circulate the cement slurry before cementing. Sometimes the cementing head can be replaced by lifting circulation head.

Features

- Its upper end is drill pipe box, the nether end is casing pin. It is a crossover(X/O) with hollow inside.
- Main body are made from AISI4145H alloy steel.

Product No.CH-01

Circulation Head Main Technical Parameters

Size (in)	Body OD Size(mm)	ID size (mm)	Top box conn	Bottom Pin Conn	Length (mm)	W.P. psi
4"	121	70	3½" IF	4" Casing thread	600 / 915	5000
4½"	121	70	3½" IF	4½" Casing thread		
5"	128	70	3½" IF	5" Casing thread		
5½"	145	70	3½" IF	5½" Casing thread		
5¾"	148	70	3½" IF	5¾" Casing thread		
6⅝"	178	100	4½" IF	6⅝" Casing thread		
7"	179	100	4½" IF	7" Casing thread		
7⅝"	195	100	4½" IF	7⅝" Casing thread		
7¾"	198	100	4½" IF	7¾" Casing thread		
7⅞"	202	100	4½" IF	7⅞" Casing thread		
8⅝"	222	100	4½" IF	8⅝" Casing thread		
9⅝"	270	100	4½" IF	9⅝" Casing thread		
9⅞"	270	100	4½" IF	9⅞" Casing thread		
10¾"	275	100	4½" IF	10¾" Casing thread		
11¾"	300	100	4½" IF	11¾" Casing thread		
12¾"	326	100	4½" IF	12¾" Casing thread		
13⅜"	342	100	4½" IF	13⅜" Casing thread		
13⅝"	348	100	4½" IF	13⅝" Casing thread		
16"	410	100	4½" IF	16" Casing thread		
16¾"	428	100	4½" IF	16¾" Casing thread		
18⅝"	475	100	4½" IF	18⅝" Casing thread		
20"	510	100	4½" IF	20" Casing thread		

4. Circulating Swage

- The top of Circulating Swage connects to the hoses, the bottom connects to the casing.
- Main body is made from AISI4145H alloy steel.

Product No.CS-01

Product No.CS-02

Circulating Swage Main Technical Parameters

Size (in)	Body OD Size(mm)	ID size (mm)	Top box conn	Bottom Pin Conn	Length (mm)	W.P. psi
4"	121	50.8	2" FIG1502F	4" Casing thread	500	5000
4½"	121	50.8	2" FIG1502F	4½" Casing thread		
5"	128	50.8	2" FIG1502F	5" Casing thread		
5½"	145	50.8	2" FIG1502F	5½" Casing thread		
5¾"	148	50.8	2" FIG1502F	5¾" Casing thread		
6⅝"	178	50.8	2" FIG1502F	6⅝" Casing thread		
7"	179	50.8	2" FIG1502F	7" Casing thread		
7⅝"	195	50.8	2" FIG1502F	7⅝" Casing thread		
7¾"	198	50.8	2" FIG1502F	7¾" Casing thread		
7⅞"	202	50.8	2" FIG1502F	7⅞" Casing thread		
8⅝"	222	50.8	2" FIG1502F	8⅝" Casing thread		
9⅝"	270	50.8	2" FIG1502F	9⅝" Casing thread		
9⅞"	270	50.8	2" FIG1502F	9⅞" Casing thread		
10¾"	275	50.8	2" FIG1502F	10¾" Casing thread		
11¾"	300	50.8	2" FIG1502F	11¾" Casing thread		
12¾"	326	50.8	2" FIG1502F	12¾" Casing thread		
13⅜"	342	50.8	2" FIG1502F	13⅜" Casing thread		
13⅝"	348	50.8	2" FIG1502F	13⅝" Casing thread		
16"	410	50.8	2" FIG1502F	16" Casing thread		
16¾"	428	50.8	2" FIG1502F	16¾" Casing thread		
18⅝"	475	50.8	2" FIG1502F	18⅝" Casing thread		
20"	510	50.8	2" FIG1502F	20" Casing thread		

5. Drill Pipe Circulating Swage

- The top of Drill Pipe Circulating Swage connects to the hoses, the bottom connects to the Drill Pipe.
- Main body are made from AISI4145H alloy steel.

Product No.DCS-01

Drill Pipe Circulating Swage Main Technical Parameters

Size (in)	Body OD Size(mm)	ID size (mm)	Top box conn	Bottom Pin Conn	Length (mm)	W.P. psi
2⅞"	105	50.8	2" FIG1502F	2⅞IF（NC31）	305	7500
3½"	121	50.8	2" FIG1502F	3½IF（NC38）		
4"	146	50.8	2" FIG1502F	3½IF（NC38）		
4½"	158	50.8	2" FIG1502F	3½IF（NC38）		
5"	158	50.8	2" FIG1502F	4½IF（NC50）		
5½"	185	50.8	2" FIG1502F	FH5½		

6. Quick-Latch Circulating Swage

- The top of Quick-Latch Circulating Swage connects to the hoses, the bottom connects to the cement head famale sub.
- Main body are made from AISI4135H alloy steel.

Product No.QCS-01

7. Rotary Circulating Swage

- The top of Rotary Circulating Swage connects to the drill pipe or the hose, the bottom connects to the Drill Pipe.
- Main body is made from AISI4145H alloy steel.
- Ball bearing, rotating easy.
- Working pressure 5000psi

Product No.RCS-01

Product No.RCS-02

8. Cement Head Accessory

Product No.Part-01
Chrome-plated Pins

Product No.Part-02
Pin Assembly

Product No.Part-03
Plug Valves Threaded Connection

Product No.Part-04
Integral Plug Valve

Product No.Part-05
Landing Famale jJoint

Product No.Part-06
Pressure Gauge Joint

Product No.Part-07
Pressure Gauge

Product No.Part-08
Sealing

9. Technical Requirements and Testing

Cement head /Circulation Head/Swage body, quick-latch joints, cap, pin assembly and other materials mechanical properties must meet the following requirements:

- Yield strength: σs ⩾ 550Mpa
- Tensile strength: σb ⩾ 750MPa
- Toughness: Akv ⩾ 60J
- Heat Treatment Hardness: HB270 ~ 300
- Seals should be acid, alkali, oil.
- Seals Share A hardness：HS 60~80
- Temperature: -30 ℃ ~ 120 ℃

Cement Head /Circulation Head/Swage Pressure Testing

Working Pressure Psi	Testing Pressure Psi	First Time Steady Pressure minutes	Second Time Steady Pressure minutes
2000	3000	3	15
3000	4500	3	15
5000	7500	3	15
7150	10000	3	15

Plug Valve and Manifold Pressure Testing

Working Pressure Psi	Testing Pressure Psi	First Time Steady Pressure minutes	Second Time Steady Pressure minutes
10000	10000	3	15
15000	15000	3	15