

CIRCULATING SUBS

→ Circulation sub is a multiple-opening circulation sub used to protect the downstream BHA components during pumping of drilling fluids. It switches drilling fluid flow path from the ID of the string to the annulus.

FEATURES

- Original design allows pumping of aggressive fillers and increasing circulation
- Improved hole cleaning
- Effective during horizontal and extended-reach drilling
- Compatible with salt-saturated muds
- Enables multiple pumping of all types of lost-circulation and plugging materials in areas of lost circulation

Parametr size	KC54-S	KC75-S	KC89-S	KC105-S	KC120-S	KC172-S	KC178-S	KC210-S	KC240-S
OD, mm	54	75	89	105	121	172	178	210	240
ID, mm	8	16	25,5	25,5	32	32,5	32,5	38	38
Overall length, mm	1270	1676	1826	1864	2532	3014	3027	3127	3133
Body length, mm	1220	1600	1750	1775	2430	2900	2900	3000	3000
Pin connection	NC-16	NC-23	NC-26	NC-31	NC-38	NC-50	5 1/2 FH	6 5/8 Reg (6 5/8 FH)	7 5/8 Reg
Box connection	NC-16	NC-23	NC-26	NC-31	NC-38	NC-50	5 1/2 FH	6 5/8 Reg (6 5/8 FH)	7 5/8 Reg
Activation ball, Diameter, mm (inch)	15,9 (5/8")	21	31,8 (1 1/4")	31,8 (1 1/4")	38,1 (1 1/2")	50,8 (2")	50,8 (2")	63,5 (2 1/2")	63,5 (2 1/2")
Deactivation ball, Diameter, mm (inch)	11,1 (7/16")	19,05 (3/4")	28,575 (1 1/8")	28,575 (1 1/8")	34,9 (1 3/8")	34,9 (1 3/8")	34,9 (1 3/8")	44,4 (1 3/4")	44,4 (1 3/4")
Deactivation pressure, kgf/cm ²	155	155	147,6	147,6	147,6	147,6	147,6	155	155
Number of ports	3	2	2	2	2	2	2	2	2
Dia of ports, mm	9,1	16	17,3	17,3	27,9	27,9	27,9	34	34
Max. flow rate of drilling fluid, l/s	4	5	12	12	20	38	38	56	70
Drilling fluid density, kg/m ³ , max.	1600	1600	1600	1600	1600	1600	1600	1600	1600
Drilling fluid sand content, %, max.	1	1	1	1	1	1	1	1	1
Number of cycles	5	5	5	5	5	5	5	5	5
Max. tensile load, kgf	52300	70000	85000	100000	125000	250000	300000	450000 (6 5/8 FH) 325000 (6 5/8 Reg)	730000
Weight, kg	17,6	48,8	64,4	97	164,6	408	436,3	643,8	892