KEMAICO

Reverse Circulation Hammer & Bits

CATALOGUE GUIDE

CASING TUBES & CASING SHOE

The Characteristics Of RC Hammers

RC series reverse circulation DTH Hammer is the latest developed product of our company,it is mainly used for deep exploration drilling and stope ore grade control.

It has the following characteristics:

- Based on previous experience of ordinary hammers,combined with the features of reverse circulation hammer,optimized internal structure and ideal energy transfer, thus ensuring the series of hammers drilling with fast,smooth and continuous sampling.

- The internal structure is very simple with components of high rigidity, thus ensuring long life and easy maintenance of the hammer.

- The collection tube adopts an integrative design and can be replaced without disassembling the hammer. With carburizing treatment,it has good abrasive resistance.

- Equipped with bits designed with patent,Simply by replacing the drill bit,the same hammer can drill holes of different sizes ensuring that the sample is not contaminated.

- In difficult conditions such as loose soil,hard rock and plenty of water exists,sampling can be done well.

Explanation of The characteristics of HRC Hammers

For Example :RC3-E531

- RC-Reverse Circulation DTH Hammer
- 3-Hammer item number
- E531-Drill Bits item number

Introduction of R.C. Drilling and R.C. DTH Hammers

It has the following characteristics:

- R.C. Drilling,referred to as "Center Sample Recovery" or "Dual Wall Drilling", employs a Dual Wall Pipe where the drilling medium, normally high pressure air,is passed between the outer and inner tubes down to the face of the drilling bit where it is returned up the centre tube along with the sample cut by the drill bit.

The use and the advantages of the R.C. DTH Hammers:

- **No contamination**

  The R.C. System collects sample through the recovery holes in the face of the drill bit immediately as the cuttings or sample is formed.The drilled sample does not have to travel the length of the hammer where contamination and loss of sample takes place.

- **Higher Production**

  In broken and fractured ground conditions, the R.C. will often out perform the conventional hammer in terms of penetration rates.

- **Dry Sample**

  Even in certain water bearing stratas it is still possible to collect a dry sample because the cuttings(sample) are collected as they formed through the face of the drill bit.

- **Higher Sample Recovery**

  Because the sample is collected through the face of the drill bit there is no loss of sample when drilling through broken or fractured ground. And since the bit matched to the chuck size,there is very little bypass of sample and recovery rates of up to 98% are generally achievable.

RC5.5-P52 R.C. HAMMER

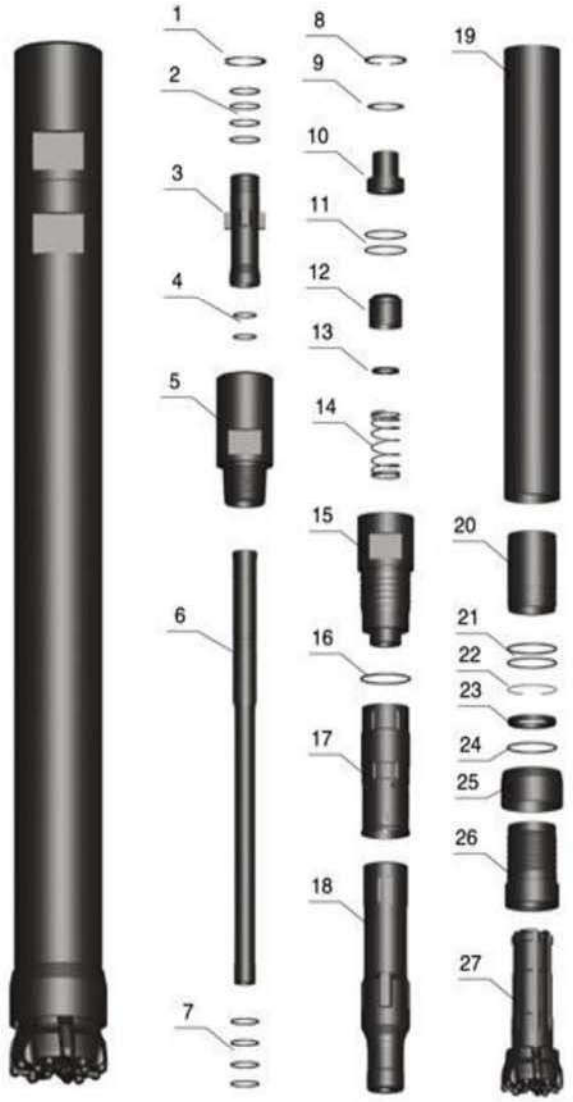
5.5"R.C. Hammers	Item Description	Weight (Kg)	Part Number
1	"O" Ring	0.02	RC5.5-P52-01
2	Adaptor Screen	2.19	RC5.5-P52-02
3	Circlip	0.04	RC5.5-P52-03
4	Airscreen Top Load	0.42	RC5.5-P52-04
5	Circlip	0.03	RC5.5-P52-05
6	Top Sub	8.92	RC5.5-P52-06
7	Plunger	0.63	RC5.5-P52-07
8	"Y" Ring	0.03	RC5.5-P52-08
9	Spring	0.12	RC5.5-P52-09
10	Make Up Ring Steel	0.10	RC5.5-P52-10
11	Viton Make Up Ring	0.05	RC5.5-P52-11
12	"O" Ring	0.02	RC5.5-P52-12
13	Distributor	1.31	RC5.5-P52-13
14	"O" Ring	0.02	RC5.5-P52-14
15	"O" Ring	0.02	RC5.5-P52-15
16	Sample Tube	4.52	RC5.5-P52-16
17	"O" Ring	0.02	RC5.5-P52-17
18	Mount Sample Tube	0.80	RC5.5-P52-18
19	Lnner Cylinder	7.39	RC5.5-P52-19
20	Piston	14.63	RC5.5-P52-20
21	Piston Case	18.86	RC5.5-P52-21
22	Piston Retaining Ring	0.13	RC5.5-P52-22
23	Bush Drive Sub	1.89	RC5.5-P52-23
24	"O" Ring	0.02	RC5.5-P52-24
25	"O" Ring	0.02	RC5.5-P52-25
26	Bit Retaining Ring	0.31	RC5.5-P52-26
27	"O" Ring	0.02	RC5.5-P52-27
28	Shroud	1.86	RC5.5-P52-28
29	Drive Sub	4.17	RC5.5-P52-29
30	Drill Bit	11.01	RC5.5-P52-30

Technical Date

Length(Less bit)	Weight(Less bit)	External diameter	Bit Shank	Hole Range	Connection Thread
1227mm	68.5Kg	ø121mm	PR52	ø126-ø142	4"-4.5"Remet 4"-4.5"Metzke

Working Pressure	Impact rate at 2.4Mpa	Recommended rotation speed	Air Consumption		
			1.7Mpa	2.4Mpa	3.0Mpa
1.5-3.5Mpa	35HZ	25-40r/min	16m³/min	22m³/min	28m³/min

RC5.5-E547 R.C. HAMMER



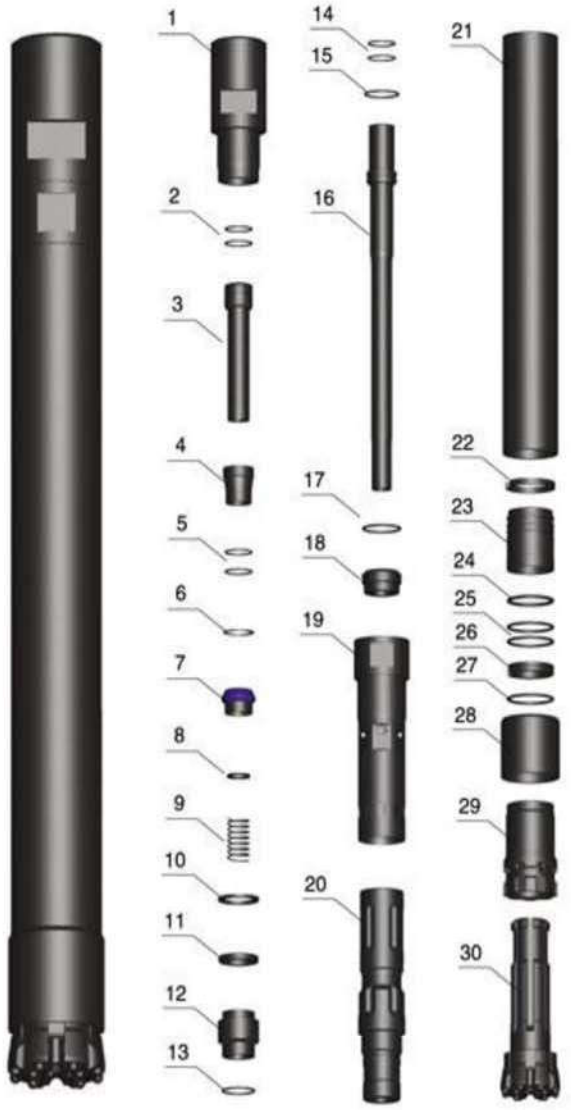
5.5"R.C. Hammers	Item Description	Weight (Kg)	Part Number
1	Circlip	0.04	RC5.5-E547-01
2	"O" Ring	0.02	RC5.5-E547-02
3	Adaptor Screen	2.95	RC5.5-E547-03
4	"O" Ring	0.02	RC5.5-E547-04
5	Top Sub	7.38	RC5.5-E547-05
6	Sample Tube	4.61	RC5.5-E547-06
7	"O" Ring	0.02	RC5.5-E547-07
8	Circlip	0.04	RC5.5-E547-08
9	Airscreen	0.02	RC5.5-E547-09
10	Distributor Nozzle	0.48	RC5.5-E547-10
11	"O" Ring	0.02	RC5.5-E547-11
12	Plunger	0.53	RC5.5-E547-12
13	"Y" Ring	0.02	RC5.5-E547-13
14	Spring	0.12	RC5.5-E547-14
15	"O" Ring	0.02	RC5.5-E547-15
16	Lnner Cylinder	10.97	RC5.5-E547-16
17	Piston	17.08	RC5.5-E547-17
18	Piston Case	18.55	RC5.5-E547-18
19	Bush Drive Sub	3.04	RC5.5-E547-19
20	"O" Ring	0.02	RC5.5-E547-20
21	Piston Retaining Ring	0.04	RC5.5-E547-21
22	Bit Retaining Ring	0.23	RC5.5-E547-22
23	"O" Ring	0.02	RC5.5-E547-23
24	Shroud	1.70	RC5.5-E547-24
25	Drive Sub	3.61	RC5.5-E547-25
26	Drill Bit	14.30	RC5.5-E547-26

Technical Date

Length(Less bit)	Weight(Less bit)	External diameter	Bit Shank	Hole Range	Connection Thread
1270mm	71.0Kg	ø124.5mm	RE547	ø130-ø146	4.5"Remet 4.5"Metzke

Working Pressure	Impact rate at 2.4Mpa	Recommended rotation speed	Air Consumption		
			1.7Mpa	2.4Mpa	3.0Mpa
1.5-3.5Mpa	35HZ	25-40r/min	16m³/min	22m³/min	28m³/min

RC5.5-P54 R.C. HAMMER



5.5"R.C. Hammers	Item Description	Weight (Kg)	Part Number
1	Top Sub	11.61	RC5.5-P54-01
2	"O" Ring	0.02	RC5.5-P54-02
3	Adaptor Screen	2.35	RC5.5-P54-03
4	Air Screen	0.37	RC5.5-P54-04
5	"O" Ring	7.79	RC5.5-P54-05
6	Circlip	0.04	RC5.5-P54-06
7	Plunger	0.58	RC5.5-P54-07
8	"Y" Ring	0.02	RC5.5-P54-08
9	Spring	0.12	RC5.5-P54-09
10	Make Up Ring Steel	0.14	RC5.5-P54-10
11	Viton Make Up Ring	0.06	RC5.5-P54-11
12	Distributor	1.54	RC5.5-P54-12
13	"O" Ring	0.02	RC5.5-P54-13
14	"O" Ring	0.02	RC5.5-P54-14
15	"O" Ring	0.02	RC5.5-P54-15
16	Sample Tube	6.47	RC5.5-P54-16
17	"O" Ring	0.02	RC5.5-P54-17
18	Mount Sample Tube	1.02	RC5.5-P54-18
19	Lnner Cylinder	8.54	RC5.5-P54-19
20	Piston	17.20	RC5.5-P54-20
21	Piston Case	23.44	RC5.5-P54-21
22	Piston Retaining Ring	0.20	RC5.5-P54-22
23	Bush Drive Sub	2.53	RC5.5-P54-23
24	"O" Ring	0.02	RC5.5-P54-24
25	"O" Ring	0.02	RC5.5-P54-25
26	Bit Retaining Ring	0.43	RC5.5-P54-26
27	"O" Ring	0.02	RC5.5-P54-27
28	Shroud	2.35	RC5.5-P54-28
29	Drive Sub	4.90	RC5.5-P54-29
30	Drill Bit	18.33	RC5.5-P54-30

Technical Date

Length(Less bit)	Weight(Less bit)	External diameter	Bit Shank	Hole Range	Connection Thread
1294mm	84.50Kg	ø130mm	PR54	ø135-ø150	4.5"Remet 4.5"Metzke

Working Pressure	Impact rate at 2.4Mpa	Recommended rotation speed	Air Consumption		
			1.7Mpa	2.4Mpa	3.0Mpa
1.5-3.5Mpa	35HZ	25-40r/min	16m³/min	22m³/min	28m³/min

PR 52 Reverse circulation drill bit and shroud

Diameter		No × Button diameter, mm		Button angle°	Flushing holes	Shroud Diameter	Weight (Kg)	Part No
mm	inch	Gauge Buttons	Front Buttons					
133	5 1/4	8×16	10×14	35	2	131	11.2	PR52-133
136	5 3/8	8×16	6×16+3×14	35	2	134	11.5	PR52-136
140	5 1/2	8×16	6×16+3×14	35	2	138	11.9	PR52-140
143	5 5/8	8×16	6×16+3×14	35	2	141	12.3	PR52-143

RE 547 Reverse circulation drill bit and shroud

Diameter		No × Button diameter, mm		Button angle°	Flushing holes	Shroud Diameter	Weight (Kg)	Part No
mm	inch	Gauge Buttons	Front Buttons					
136	5 3/8	8×16	6×16+3×14	35	2	134	15.1	RE547-136
140	5 1/2	8×16	6×16+3×14	35	2	138	15.5	RE547-140
143	5 5/8	8×16	6×16+3×14	35	2	141	15.8	RE547-143
146	5 3/4	8×16	6×16+3×14	35	2	144	16.3	RE547-146

PR 54 Reverse circulation drill bit and shroud

Diameter		No × Button diameter, mm		Button angle°	Flushing holes	Shroud Diameter	Weight (Kg)	Part No
mm	inch	Gauge Buttons	Front Buttons					
136	5 3/8	8×16	6×16+3×14	35	2	134	18.2	PR54-136
140	5 1/2	8×16	6×16+3×14	35	2	138	18.5	PR54-140
143	5 5/8	8×16	6×16+3×14	35	2	141	18.8	PR54-143
146	5 3/4	8×16	6×16+3×14	35	2	144	19.2	PR54-146

RC 6A Reverse circulation drill bit and shroud

Diameter		No × Button diameter, mm		Button angle°	Flushing holes	Shroud Diameter	Weight (Kg)	Part No
mm	inch	Gauge Buttons	Front Buttons					
152	6	8×18	4×16+4×14	35	2	150	21.5	RC6A 152
159	6 1/4	8×18	4×16+4×14	35	2	157	21.9	RC6A 159
165	6 1/2	8×18	8×16	35	2	163	22.5	RC6A 165
178	7	8×18	10×16	35	2	176	24.2	RC6A 178

RC 8A Reverse circulation drill bit and shroud

Diameter		No × Button diameter, mm		Button angle°	Flushing holes	Shroud Diameter	Weight (Kg)	Part No
mm	inch	Gauge Buttons	Front Buttons					
190	7 1/2	10×18	13×16	35	2	188	44.2	RC8A 190
203	8	10×18	8×18+8×16	35	2	201	46.5	RC8A 203
219	8 5/8	10×18	8×18+8×16	35	2	217	49.8	RC8A 219
235	9 1/4	12×18	30×16	34	2	233	56.4	RC8A 235

RC 10A Reverse circulation drill bit and shroud

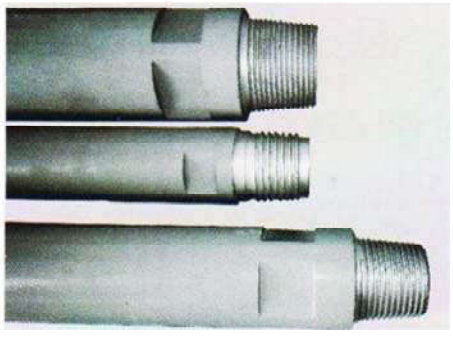
Diameter		No × Button diameter, mm		Button angle°	Flushing holes	Shroud Diameter	Weight (Kg)	Part No
mm	inch	Gauge Buttons	Front Buttons					
254	10	12×18	12×18+8×16	35	2	252	85.3	RC10A 254
279	11	12×19	20×18+9×16	35	2	277	91.2	RC10A 279
311	12 1/4	15×19	27×18+9×16	35	2	309	99.5	RC10A 311
330	13	15×19	27×18+9×16	35	2	328	114.8	RC10A 330

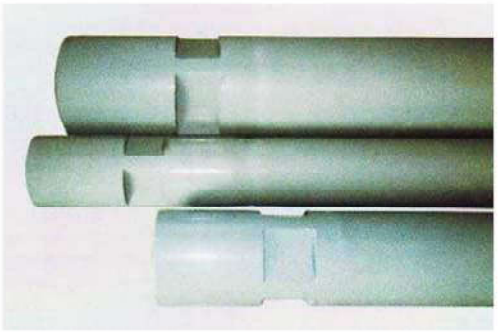
Reverse circulation pipes(dual wall drilling）

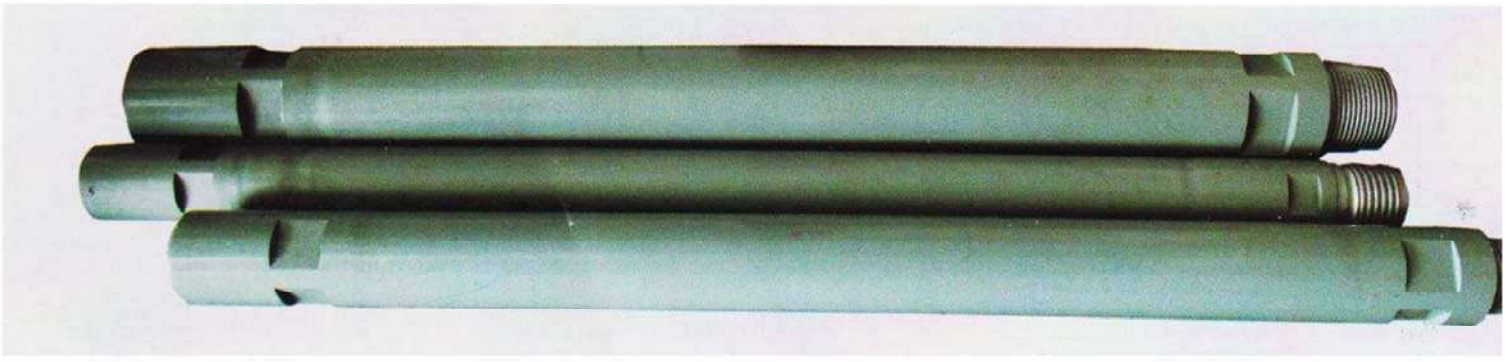
High pressure air transported into somewhere of the well along with air pip,via mixer to inject the high-pressure air into the pipe with liquid,due to the density of mixed liquor lower than the flushing liquor therefore a differential pressure occured between pipe and sample tube that to make the mixed air and liquid folw up fleetly by the fluid column pressure and take the rock debris or power out to the ground from bottom of the hole continuously.By this drilling method will provide with advantages like high penetration rate,quality pore-forming and fewer hole collapse during drilling in loose formation.

This series reverse circulation pipes can increase penetration in lost-circulation formation,reduce drilling fluid consumption,protect reservoir stratum and save the cost of other consumption tools.In additional,the pipes can be worked in two direction circulation drilling ways to control the well drilling.By reverse circulation method to kill the well the heavy mud can be transferred directly to the bottom of the well,no periodic circulation and save time.

Type	external dia. of outer pipe （mm）	Inner dia. of inner pipe （mm）	thread of pipe	Length （mm）	sealing	Depth （m）	Marks
MD80/48	80×8	48×5	buttress thread	1500-6000	dual o ring radial	300-800	
MD89/38	89×8.56	38×4	3"Remet/Metzke	1500-6000	dual o ring radial	300-800	outer pipe R780 or DZ50(optional) inner pipe
MD102/46	102×8.56	46×5	3"Remet/Metzke	1500-6000	dual o ring radial	300-1000	
MD108/46	108×8.56	46×5	3 1/2"Remet/Metzke	1500-6000	dual o ring radial	300-1200	
MD114/50	114×8.56	50×5.5	4"Remet/Metzke	1500-6000	dual o ring radial	300-1200	
MD120/60	127×8.56	60×7	4"Remet/Metzke	1500-6000	dual o ring radial	Less5000	
MD146/73	146×10	75	4 1/2"Remet/Metzke	1500-6000	dual o ring radial	Less5000	







"Globle Drilling Industry Experts"

No matter what kinds of rock-Soft rock,loose-medium rock, hard rock and any other special formations, just tell us what you need,our special Tailored service is waiting for you upon you demand.

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