

Secoroc COP RC45/ COP RC45 HD

Reverse Circulation





Smaller. Lighter. Faster.

The Secoroc COP RC45 is a different hammer using the latest material technology providing the best possible performance to our customers! When you purchase COP RC45 you buy the best and most innovative technology on the market. The COP RC45 hammer will give you both easy handling and outstanding drilling performance. No compromises.



Great performance in a small package

The Secoroc COP RC45 reverse circulation hammer features a revolutionary new design. It's 40% shorter than the nearest competitor. And shorter means less weight. The COP RC45 is more than 30% lighter than most hammers doing the same job.

High frequency

The COP RC45 has a unique air chamber design. Much smaller chambers build up pressure faster and makes the piston strike at a much faster rate. The result is marginally lower impact energy. But, this is more than compensated for by a much higher strike frequency – at 30 bar an increase by 30% compared to RC 50. This leads to a great increase in power output and a sizeable improvement in penetration rate. Tests show excellent drilling results in all types of rock – also in difficult rock formations.

Efficient sampling

The COP RC45 features Secoroc's unique tube retention system. This design makes it easy to service and replace tubes since you don't have to disassemble the hammer. Quite simply this means minimum down-time and maximum time producing samples.

Lower total cost

All in all, COP RC45 offers high productivity, a long service life and – most importantly – efficient sampling.



Main benefits

- **High frequency**
– to maximize power output.
- **Simple design**
– for easy maintenance.
- **Light**
– for easy handling.
- **New hammer cycle**
– to improve fuel efficiency.

Technical specifications COP RC45

COP RC45 specifications

Product No. 89011483	
Product code 9704-RC-00-66B-91-00	
Outside diameter (mm)	120
Length without bit (mm)	803
Weight without bit (kg)	41
Wrench flat on backhead (mm)	102
Bit size, min-max (mm)	125-140
Recommended bit sizes (mm)	127-136
Bit shank	RC 45
Piston weight (kg)	10,4
Backhead thread	4½" Remet Box
Working pressure, (bar (Psi))	10-35 (145-500)

COP RC45 sleeve assortment

OD (mm)	OD (inch)	Chuck sleeve Design	Product No.	Product Code
124	4.88	RC45 std	89011487	9704-RC-00-000-00-000-C24
126	4.96	RC45 std	89011488	9704-RC-00-000-00-000-C26
129	5.08	RC45 std	89011489	9704-RC-00-000-00-000-C29
132	5.19	RC45 std	89011490	9704-RC-00-000-00-000-C32
135	5.31	RC45 std	89011491	9704-RC-00-000-00-000-C35
137	5.39	RC45 std	89011492	9704-RC-00-000-00-000-C37
139	5.47	RC45 std	89011493	9704-RC-00-000-00-000-C39

COP RC45 air consumption

Air pressure	Air cons.	Impact rate		Penetration rate	Rec.
					Values from standardized laboratory test in Swedish granite, 220 MPa, 30 % SiO.
Bar	L/s	Strokes/min	Hz	mm/min	Rpm
10	110	2100	35	100	85-95
15	175	2400	40	200	95-105
20	250	2820	47	533	110-125
25	335	3060	51	700	120-135
30	430	3240	54	933	130-145

Performance figures are average values for new hammers at sea level. Specifications and other data subject to alteration without prior notice.

If your drill rig can't reach the RPMs above please contact your local Epiroc representative for recommendation.

COP RC45 shank bit assortment

OD (mm)	OD (inch)	Design	Product No.	Product Code
125	4.92	Trubbnos gauge	90029886	100-5125-91-0489,10-20
127	5.00	Trubbnos gauge	90029774	100-5127-91-0498,10-20
130	5.12	Trubbnos gauge	90029887	100-5130-91-0498,10-20
133	5.25	Trubbnos gauge	90029772	100-5133-91-0491,10-20
136	5.39	Trubbnos gauge	90029888	100-5136-91-0491,10-20
140	5.51	Trubbnos gauge	90029773	100-5133-91-0491,10-20
165	6.49	Collaring bit	90029861	100-5165-91-0412,10-20

COP RC45 kits, consumables, accessories

Description	Product No.	Product code
Seal kit	89012400	9704-RC-00-66B-91-000-K47
Check valve kit	89011569	9704-RC-00-000-00-000-K17
Rebuild kit	89012401	9704-RC-00-66B-91-000-K40
Backhead assembly	89012364	9704-RC-00-66B-00-000-A20
Casing	89011482	9704-RC-00-000-00-000-004
Inner tube assembly	89011499	9704-RC-00-000-91-000-R95
Inner tube adapter assembly	89012365	9704-RC-00-66B-00-000-R94
Grinding wheel, 14 mm	87001025	9500-1025
Grinding wheel 15,8 mm	87005166	95-3-DC-0158-Tru,H
Grinding wheel, 16 mm	87001027	9500-1027
Grinding wheel, 19 mm	87003966	9500-3966
Grinding wheel, Trubbnos 19,1 mm	87005167	9500-3966
Wrench NV102	89000667	8484-0214-13
Bit holder	87004605	9500-4605



Technical specifications COP RC45 HD

COP RC45 HD specifications

Product No. 89012468	
Product code 9704-RC-00-66B-91-H00	
Outside diameter (mm)	125
Length without bit (mm)	803
Weight without bit (kg)	48,5
Wrench flat on backhead (mm)	102
Bit size, min-max (mm)	127-140
Recommended bit sizes (mm)	130-140
Bit shank	RC 45
Piston weight (kg)	10,4
Backhead thread	4½" Remet Box
Working pressure, (bar (Psi))	10-35 (145-500)

COP RC45 HD air consumption

Air pressure	Air cons.	Impact rate		Penetration rate	Rec.
				Values from standardized laboratory test in Swedish granite, 220 MPa, 30 % SiO.	
Bar	l/s	Strokes/min	Hz	mm/min	Rpm
10	110	2100	35	100	85-95
15	175	2400	40	200	95-105
20	250	2820	47	533	110-125
25	335	3060	51	700	120-135
30	430	3240	54	933	130-145

Performance figures are average values for new hammers at sea level. Specifications and other data subject to alteration without prior notice.

If your drill rig can't reach the RPMs above please contact your local Epiroc representative for recommendation.

COP RC45 HD kits, consumables, accessories

Description	Product No.	Product code
Seal kit	89012400	9704-RC-00-66B-91-000-K30
Check valve kit	89011569	9704-RC-00-000-00-000-K17
Rebuild kit	89012469	9704-RC-00-66B-91-H00-K40
Backhead assembly	89012462	9704-RC-00-66B-00-H00-A20
Casing	89012461	9704-RC-00-000-00-H00-004
Inner tube assembly	89011499	9704-RC-00-000-91-000-R95
Inner tube adapter assembly	89012365	9704-RC-00-66B-00-000-R94
Grinding wheel, 14 mm	87001025	9500-1025
Grinding wheel 15,8 mm	87005166	95-3-DC-0158-Tru,H
Grinding wheel, 16 mm	87001027	9500-1027
Grinding wheel, 19 mm	87003966	9500-3966
Grinding wheel, Trubbnos 19,1 mm	87005167	9500-3966
Wrench NV102	89000667	8484-0214-13
Bit holder	87004605	9500-4605

COP RC45 HD sleeve assortment

OD (mm)	OD (inch)	Chuck sleeve Design	Product No.	Product Code
129	5.08	RC45 HD	89012463	9704-RC-00-000-00-H00-C29
132	5.9	RC45 HD	89012464	9704-RC-00-000-00-H00-C32
135	5.31	RC45 HD	89012465	9704-RC-00-000-00-000-C35
137	5.39	RC45 HD	89012466	9704-RC-00-000-00-H00-C37
139	5.47	RC45 HD	89012467	9704-RC-00-000-00-H00-C39
164	6.45	RC45 HD/STD	89012503	9704-RC-00-000-00-000-C64

COP RC45 HD shank bit assortment

OD (mm)	OD (inch)	Design	Product No.	Product Code
130	5.12	Trubbnos gauge	90029887	100-5130-91-0498,10-20
133	5.25	Trubbnos gauge	90029772	100-5133-91-0491,10-20
136	5.39	Trubbnos gauge	90029888	100-5136-91-0491,10-20
140	5.51	Trubbnos gauge	90029773	100-5133-91-0491,10-20
165	6.49	Collaring bit	90029861	100-5165-91-0412,10-20



COP RC configurator

Rig/Type of pipe	DR102	DR102OF	DR115	DR115OF	M40	M45	M45 OF	R40	R45
D60/65RC, L8RC	x	x	x	x	89001539	89001517	89012457	x	x
E235 (6 m)	89001442	89010238	89001396	89010263	89010208	89001560	89012457	89010309	89010279
E100 (3 m)	89001440	89010240	89001422	89010265	89010206	89001556	x	89010307	89010285
E50	89001440	89010240	89001422	89010265	89010206	89001556	x	89010307	89010285
DML (9,14 m)	x	x	x	x	x	89010365	x	x	x
Other 6 m std wrenching	89001442	89010238	89001396	89010263	89010208	89001560	89012457	89010309	89010279
Other 3 m std wrenching	89001440	89010240	89001422	89010265	89010206	89001556	x	89010307	89010285

Our online RC configurator tool is easy and simple to use. With a little input to the configurator you get a complete drill string proposal. All our RC strings can be found in the configurator. This makes it a perfect tool whether you are creating your own comprehensive selection of drill string equipment or just looking for a part number.

We recommend to change the whole string from top sub/saver sub to bit sub/dig out and use the same

manufacturer. Products from different manufacturers must never be used together. This may cause extensive wear or early breakages.

The RC configurator can be found here: <http://rhammer.secoroc.se>

For more information please contact your closest Epiroc customer center.

The COP RC45 is also available in a HD version, for extra demanding conditions.

What is COP RC45 HD?

- The HD is not high definition, but it has the same message – more bang for the buck.
- The heavy-duty version gives you longer service life, less service related issues and at the end of the day higher productivity and increased profit.
- What sets the HD version apart, is the attention we put into the details. We used our years of experience to select the best material and the best heat treatment available.
- COP RC 45 and COP RC45 HD are multi-purpose hammers suitable for all RC applications.



COP RC45 hammer:

– Easy going!

A hammer that is robust and easy to drill with, was the very first mission for the Atlas Copco Secoroc team in Fagersta, Sweden. They dedicated their efforts in combining the best materials with the best heat-treatment technologies. And in one of Europe's largest heat-treatment plants, the one in Fagersta, the hammer was born.



“Surprised in a positive way”
“Saves diesel”
“Makes us more compatible”
“One move inspection”
“Can be relied on”
“Never seen a hammer that works like on steroids”

Ricky Jackson
Operations manager, project in Tomingley, NSW

Case

When the team went to the project in Tomingley, NSW, to test the Secoroc COP RC45, they were quite skeptical about it and for some reasons; The roughness of the Australian environment in which the RC drilling equipment was found and developed during many years of trial and error, and direct in-put from drillers, put the bar very high for every new RC hammer.

The Operations manager, Ricky Jackson, shares with us his first impressions after the Secoroc COP RC45 hammer was put on test:

– When we increased the pressure of the drill rig up to 30 bar the hammer went crazy, like it was on steroids. The high frequency, that we have never seen until the COP RC45 hammer,



influenced not only the performance, but also the quality of the sampling material.

– I expected that the high performance would lead to an extensive wear of the inner-tube and

that's why the hammer is frequently checked by the driller to see what the wear level was. Usually operators are not very happy with regular inspections, but with the COP RC45 it took literally a second – you just replace the inner tube with one move. The hammer's inner tube lasted three times the life of the pipe inner tubes!!!

– I am very satisfied with the diesel consumption for the drill rig too. The hammer uses the air in a very efficient way, which, for me, means less expenses and makes my company more competitive in the cost per meter deals, says Operation manager Ricky Jackson.

Veselin Donchev,
Product manager, RC

United in performance. Inspired by innovation.

Performance unites us, innovation inspires us, and commitment drives us to keep moving forward. Count on Epiroc to deliver the solutions you need to succeed today and the technology to lead tomorrow.

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