



Secoroc Rock Drilling Tools

LARGE DTH SOLUTIONS

Atlas Copco

SECOROC CLUSTER DRILLS

THE CLUSTER DRILL RANGE

With the need for larger diameters in the foundations market worldwide we have adapted our Cluster drill packages to fit all piling rigs and to run with the drilling techniques used with conventional flushing, RC and RCD methods.

Model	Product No.	Diameter		No. of hammers		Approx. weights incl. flange & hammers		Air consumption @ 150psi	Oil rec. per hour
		mm	inch	Gauge	Face	kg	lbs	cfm	lts
CDSEZ 762 4/3	On request	762	30	3	1	2858	6300	2140	4
CDSEZ 864 4/3	On request	864	34	3	1	2950	6500	2140	4
CDSEZ 915 5/4	On request	915	36	4	1	3175	7000	2675	5
CDSEZ 1067 6/4	On request	1067	42	4	2	3561	7851	3210	6
CDSEZ 1167 7/4	On request	1167	46	4	3	4061	9076	3750	7
CDSEZ 1200 7/4	52354584	1200	47.25	4	3	4185	10198	3750	7
CDSEZ 1500 11/5	52354864	1500	59	5	6	6074	13391	5885	11
CDSEZ 1650 11/5	On request	1650	65	5	6	6647	14654	5885	11
CDSEZ 1830 13/6	On request	1830	72	6	7	8542	18832	6955	13
CDSEZ 2000 13/6	5600156482	2000	78.74	6	7	9219	20324	6955	13
CDSEZ 2300 19/7	On request	2300	90.5	7	12	15422	34000	10165	19
CDSEZ 2500 22/8	On request	2500	98.4	8	14	18000	39600	11770	22
CDSEZ 3000 29/12	On request	3000	118	12	17	28300	62260	15575	29



Item No.	Description	Product No.	Length		Approx. weights	
			mm	inch	kg	lbs
Kelly Drive / Calyx Basket Set Up						
1	Kellydrive air inlet	On request	2175	85.5	734	1615
2	Calyx basket (std)	On request	1524	60	i	i
3	Flange	On request	380	14.9	i	i
4	Cluster drill can	On request	1600	63	i	i
5	CS8 Hammers	On request	ii	ii	135	297
6	CS8 Button bit	52351905			54	119
Accessories						
	CDS Tooling package	88053135	n/a	n/a	96	211

i weights vary according to specification
 ii different chuck options available



LARGE SECOROC DTH HAMMERS & BUTTON BITS

SECOROC QL HAMMERS

Ideally suited to the foundation market the QL hammer range offers bit sizes from 244mm to 1200mm and can work with Casing Advancement Systems from 324mm to 1219mm o.d. Casings. All hammers in the range have plate drive chucks.

Description	Product No.	Thread connection	Outside diameter		Rec. hole size		Shank	Working pressure		Effective length without bit		Weight without bit	
			mm	inch	mm	inch		bar	psi	mm	inch	kg	lbs
10" Class													
QLX 100	89010561	API 6-5/8" REG PIN	228	9	251 - 279	9.875 - 11	QLX 100	7 - 25	100 350	1620	63.8	456	1007
12" Class													
QL 120	52107448	API 6-5/8" REG PIN	285	11 ^{1/4}	311 - 560	12 ^{1/4} - 24	QL 120	6 - 17	87-247	1837	72 ^{5/16}	650	1433
20" Class													
QL 200	52286523	API 8-5/8" REG PIN	396	15 ^{9/16}	440 - 660	175/16 - 26	QL 200	6 - 17	87-247	1670	65 ^{3/4}	1172	2584
QL 200S	55286531	API 8-5/8" REG PIN	396	15 ^{9/16}	711 - 914	28 - 36	QL 200S	6 - 17	87-247	1831	72 ^{1/16}	1356	2990
30" Class													
QL 300	52339363	16" Beco	660	26	762 - 914	30 - 36	QL 300	6 - 12	87 - 150	2339	92.1	4909	10800
QL 300S	52107448	16" Beco	822	32.38	965 - 1200	38 - 48	QL 300S	6 - 12	87 - 150	2626	103.4	5136	11300

BUTTON BITS

Diameter		Product No.	Short description	Weight	
mm	inch			kg	lbs
10" Class					
251	9.9	90029138	QLX 100 BIT, 9-7/8Q10XHG12	91	200
254	10.0	90029139	QLX 100 BIT, 10Q10XHG12	92	202
273	10.7	90029140	QLX 100 BIT, 10-3/4Q10XHG12	93	205
280	11.0	90029141	QLX 100 BIT, 11Q10XHG12	96	211
12" Class - Concave					
311	12.2	52302361	19mm Carbides	190	417
330	13	52131927	19mm Carbides	196	431
375	14.8	52346301	19mm Carbides	239	526
444	17.5	52107653	19mm Carbides, 25mm Gauge	282	261
508	20	52138278	19mm Carbides, 25mm Gauge	342	753
559	22	52138351	19mm Carbides, 25mm Gauge	375	825
610	24	52354537	19mm Carbides, 25mm Gauge	536	1182
20" Class - Concave					
444	17.5	52127511	25mm Carbides	392	863
559	22	51994507	25mm Carbides	523	1150
610	24	51990414	25mm Carbides	545	1200
660	26	52280716	25mm Carbides	577	1270
20" Class 'S' Chuck					
724	28.5	52345550	Cyclops design	989	2175
762	30	52298031	Cyclops design	1011	2225
864	34	52292323	Cyclops design	1200	2641
914	36	52285822	Cyclops design	1279	2813
30" Class & 30" 'S' Chuck					
724	28.5	52341070	Std chuck	1023	2250
915	36	52346848	Std chuck	2350	5170
1000	39.4	52346889	S-chuck	3020	6645
1219	48	52346947	S-chuck	3794	8346



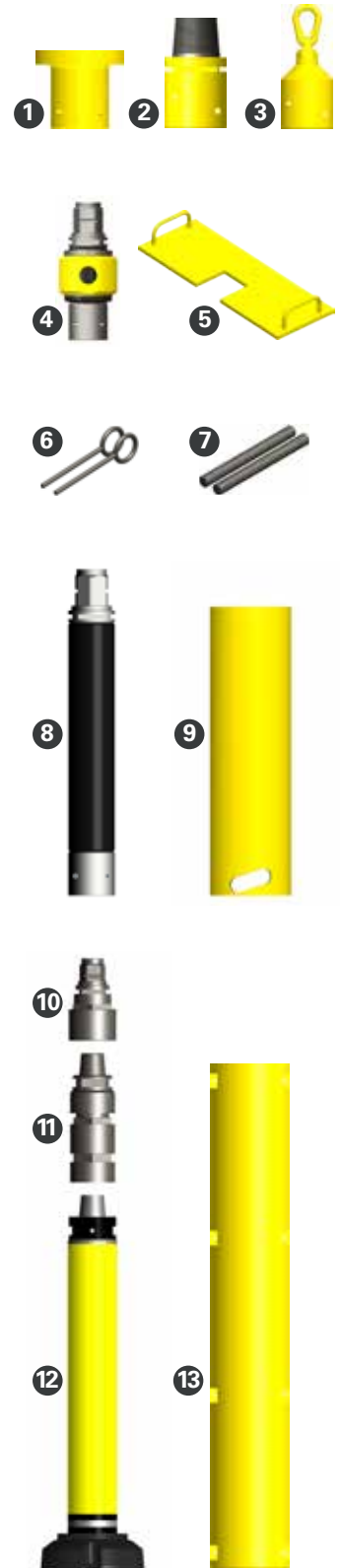
Note: Other bit sizes available on all hammers

DTH HEX DRILL STRING

DTH HEX CONNECTION

The DTH Hex Connection has now proven itself with foundation drilling contractors worldwide. Our Hex has double O-ring seals that ensure an air tight connection and always makes for a quick rod change every time. The Hex allows for larger DTH drilling on smaller rigs with no breakout facility required.

Item No.	Product No.	Description	Eff. length		O.D.		Flats A/F		Weight	
			ft	mm	inch	mm	inch	mm	kg	lbs
135 DTH Hex Connection										
	89011350	CROSSOVER, HEX135 BOX TO BLANK		254	7.6	194		152	40	88
1	on request	FLANGE TO HEX135 Box			7.6	194	6.0	152	45	99
2	89009675	CROSSOVER, HEX Box to 6-5/8" Reg Pin	1	305	7.6	194	6.0	152	37	81
4	90029141	SIDE INLET SWIVEL, 135DTH Hex	2	610	7.6	194	6.0	152	77	169
8	89009651	PIPE,194, HEX 135 Drill Pipe	4.9	1500	7.6	194	6.0	152	148	326
8	89010590	PIPE,194, HEX 135 Drill Pipe	6.6	2000	7.6	194	6.0	152	220	484
8	89009652	PIPE,194, HEX 135 Drill Pipe	9.8	3000	7.6	194	6.0	152	280	616
8	89010591	PIPE,194, HEX 135 Drill Pipe	19.7	6000	7.6	194	6.0	152	400	880
9	on request	SHROUD, DRILL PIPE 194								
10	on request	SHROUD SUB, CROSSOVER, 6 5/8"API Box								
13	on request	HAMMER SHROUD, SLIP OVER								
13	on request	HAMMER SHROUD, SPLIT TYPE								
11	89009670	12" CLASS SHOCK ABSORBER, 6 5/8"API	24.5	622	10.2	258	8.0	203.2	201	442
12	52107448	HAMMER, QL 120 STD	11.3	1837	11.3	285			650	1430
3	89009672	LIFTING SWIVEL, HEX135, 10Ton			7.6	194			44	97
5	89010662	HANGING PLATE - HEX135							35	77
7	89009657	LOCKING PIN SET SHORT, HEX135							1	2
6	89009658	LOCKING PIN SET LONG, HEX135							1	2
170 DTH Hex connection										
	89011351	CROSSOVER, HEX170 BOX TO BLANK	1	305	9.6	244		152	65	143
2	89010650	CROSSOVER, Hex Box to 8-5/8" Reg Pin	1	305	9.6	244		152	71	156
4	89011338	SIDE INLET SWIVEL 170DTH HEX								
8	89010592	PIPE,244,HEX 170 Drill Pipe	4.9	1500	9.6	244	7.6	194	275	605
8	89010593	PIPE,244,HEX 170 Drill Pipe	6.6	2000	9.6	244	7.6	194	473	1041
8	89010594	PIPE,244,HEX 170 Drill Pipe	9.8	3000	9.6	244	7.6	194	410	902
8	89010595	PIPE,244,HEX 170 Drill Pipe	19.7	6000	9.6	244	7.6	194	680	1496
9	on request	SHROUD, DRILL PIPE 244								
10	89010650	SHROUD SUB, CROSSOVER 8 5/8"API								
13	on request	HAMMER SHROUD, SLIP OVER								
13	on request	HAMMER SHROUD, SPLIT TYPE								
11	88053265	20" CLASS SHOCK ABSORBER , 8 5/8"API	36.0	914	15.0	381	11.0	279.4	260	572
12	52107448	HAMMER, QL 200 STD	65.8	1670	15.6	396			1172	2578
3	55286531	HAMMER, QL 200 S, Super Chuck	72.0	1831	21.3	540			1356	2983
5	89010656	LIFTING SWIVEL, 170DTH Hex Box, 10Ton							55	121
7	89000663	HANGING PLATE - 170DTH Hex							40	88
6	89010668	LOCKING PIN SET SHORT, HEX170							1	2
	89010667	LOCKING PIN SET LONG, HEX170							1	2
210 DTH Hex Connection										
	89011352	CROSSOVER, HEX210 BOX TO BLANK	1	305	12	305		152	65	143
2	89010653	CROSSOVER, Hex Box to 8-5/8" Reg Pin	1	305	12	305		152	71	156
4	89011070	SIDE INLET SWIVEL 210DTH HEX								
8	89010596	PIPE,305,HEX 210 Follower	4.9	1500	12.0	305	8.9	225	324	713
8	89010597	PIPE,305,HEX 210 Follower	9.8	2000	12.0	305	8.9	225	381	838
8	89010598	PIPE,305,HEX 210 Follower	12.1	3000	12.0	305	8.9	225	495	1089
8	89010599	PIPE,305,HEX 210 Follower	19.7	6000	12.0	305	8.9	225	837	1841
9	on request	SHROUD, DRILL PIPE								
10	on request	SHROUD SUB, CROSSOVER								
13	on request	HAMMER SHROUD, SLIP OVER								
13	on request	HAMMER SHROUD, SPLIT TYPE								
11	8092403316	30" CLASS SHOCK ABSORBER , 16" Beco	24.5	622	10.2	258	8.0	203.2	750	1650
12	52339363	HAMMER, QL 300 STD		2339	26.0				4909	10800
12	52339371	HAMMER, QL 300 S, Super Chuck		2626					5136	11299
3	89010660	LIFTING SWIVEL, HEX210, 15Ton							96	211
5	89010665	HANGING PLATE, HEX210							40	88
7	89010672	LOCKING PIN SET SHORT, HEX210							1	2
6	89010671	LOCKING PIN SET LONG, HEX210							1	2



DTH HEX DRILL STRING

DRILL PIPE SHROUDING

Up Hole Velocity is key to the performance of a DTH Hammer and also for the longevity of the drill string and bit. The correct size of shrouding ensures that the drill cuttings are removed efficiently out of the hole. Shrouding helps keep the hole on line and adds weight to the drill string also helping drill a straight hole and absorbing vibration.

Description	Drill pipe size			Weight
	135 DTH HEX	170 DTH HEX	210 DTH HEX	kg
Drill rod shroud-406mm o/d x 1.5m	89010600	On request	On request	161
Drill rod shroud-406mm o/d x 2.0m	89010601	On request	On request	210
Drill rod shroud-406mm o/d x 3.0m	89010602	On request	On request	308
Drill rod shroud-406mm o/d x 6.0m	89010603	On request	On request	609
Drill rod shroud-457mm o/d x 1.5m	89010604	On request	On request	187
Drill rod shroud-457mm o/d x 2.0m	89010605	On request	On request	242
Drill rod shroud-457mm o/d x 3.0m	89010606	On request	On request	352
Drill rod shroud-457mm o/d x 6.0m	89010607	On Request	On request	683
Drill rod shroud-508mm o/d x 1.5m	89010608	On request	On request	215
Drill rod shroud-508mm o/d x 2.0m	89010609	On request	On request	277
Drill rod shroud-508mm o/d x 3.0m	89010610	On request	On request	398
Drill rod shroud-508mm o/d x 6.0m	89010611	On request	On request	768
Drill rod shroud-558mm o/d x 1.5m	89010612	On request	On request	243
Drill rod shroud-558mm o/d x 2.0m	89010613	On request	On request	309
Drill rod shroud-558mm o/d x 3.0m	89010614	On request	On request	444
Drill rod shroud-558mm o/d- x 6.0m	89010615	On request	On request	850
Drill rod shroud-610mm o/d x 1.5m	89010616	On request	On request	341
Drill rod shroud-610mm o/d x 2.0m	89010617	On request	On request	433
Drill rod shroud-610mm o/dx 3.0m	89010618	On request	On request	618
Drill rod shroud-610mm o/d x 6.0m	89010619	On request	On request	1160
Drill rod shroud-660mm o/d x 1.5m	89010620	On request	On request	378
Drill rod shroud-660mm o/d x 2.0m	89010621	On request	On request	478
Drill rod shroud-660mm o/d x 3.0m	89010622	On request	On request	677
Drill rod shroud-660mm o/d x 6.0m	89010623	On request	On request	1276

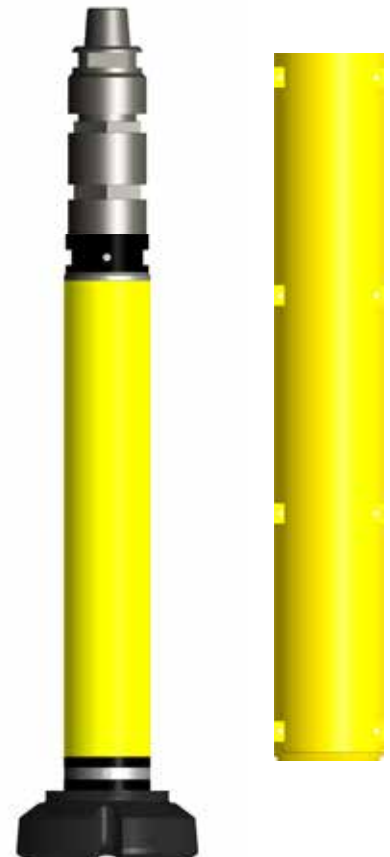
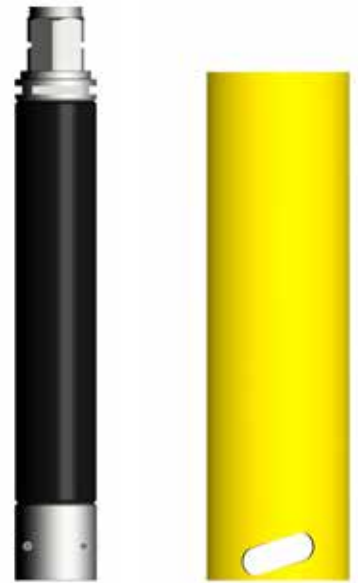
Sizes 711mm to 1219mm on request

HAMMER SHROUDING

Our hammer shrouds are supplied to suit the application. There are two designs – Slip over & Split type. The length can be fitted to suit the hammer and shock absorber if required and both types are usually supplied with a Shroud seat / Crossover sub.

UP HOLE VELOCITY:

$$UHV = \frac{CFM \times 183.4 \text{ or } L/Sec \times 76404.7}{\text{Hole dia} \times \text{Hole dia} - \text{Rod dia} \times \text{Rod dia.}}$$



DTH SHOCK ABSORBER SUBS

The In-Line Shock Subs can be fitted either directly behind the hammer or under the rotation unit to suit the application. They are designed to eliminate the harmful vibration from the hammer returning up the drill string into the rotation unit. Replacement seal and shock pad kits ensures longevity & efficiency of this product.

They come as standard with the same Box / Pin connections but "specials" can be made to order.

Description	Product No.	Connections	Eff. length		O.D.		Flats A/F		Weight kg
			inch	mm	inch	mm	inch	mm	
3" Class shock absorber	89009660	2 ^{3/8} " API Reg	14.3	362	3.1	78	2.5	64	11.5
4" Class shock absorber	89009662	2 ^{3/8} " API Reg	15.7	400	3.7	93	3.0	76.2	16.3
5" Class shock absorber	89009664	3 ^{1/2} " API Reg	17.9	454	4.5	114	3.8	95.25	27.5
6" Class shock absorber	89009666	3 ^{1/2} " API Reg	19.5	495	5.2	133	4.5	114.3	41.5
8" Class shock absorber	89009668	4 ^{1/2} " API Reg	22.8	578	7.0	178	4.7	120	85
10" Class shock absorber	89009729	6 ^{5/8} " API Reg	25.1	638	8.9	225	6.7	169.8	151
12" Class shock absorber	89009670	6 ^{5/8} " API Reg	24.5	622	10.2	258	8.0	203.2	201
20" Class shock absorber	88053265	8 ^{5/8} " API Reg	36.0	914	15.0	381	11.0	279.4	260
24" Class shock absorber	88051332	8 ^{5/8} " API Reg	37.2	945	18.0	457	11.8	300	1005
30" Class shock absorber	8092403316	16" Beco	36.3	923	19.0	480	12.0	324	750

Description	Product No.	Weight approx. kg
3" Class seal & buffer kit	89009661	0.2
4" Class seal & buffer kit	89009663	0.2
5" Class seal & buffer kit	89009665	0.2
6" Class seal & buffer kit	89009667	0.3
8" Class seal & buffer kit	89009669	0.4
10" Class seal & buffer kit	89009728	0.5
12" Class seal & buffer kit	89009671	1
20" Class seal & buffer kit	88053266	1.3
24" Class seal & buffer kit	tba	1.5
30" Class seal & buffer kit	tba	2



DTH OIL INJECTION ASSEMBLIES & AIR MANIFOLDS



OIL INJECTION PUMPS C/W INJECTION MANIFOLD

The injection unit comprises of three main components:

1. Pneumatic piston pump assembly
2. Oil reservoir
3. Injection manifold

The unit is of modular construction and if required the injection manifold can be easily detached and mounted separately on the rig or placed on the ground. The pump unit is a reciprocating piston pump powered by compressed air. When the air flow is turned on to the hammer the pump will start automatically. There are extra inlets and outlets to allow for additives/water injection.



DTH AIR MANIFOLDS

Air flow to the hammer is all important. Our air manifolds are designed to ensure a smooth and unrestricted supply of air. They can be tailor made to suit the application.



OIL INJECTION PUMP/ AIR MANIFOLD COMBINATIONS

In certain applications a combined oil injection pump & air manifold can be beneficial. Our "combo" units can be custom made to suit. The 5 x 2" Inlet unit pictured is perfect for the QL 200 and the smaller Cluster drills up to 1.2mtr dia.

Description	Product No.	Oil reservoir capacity	Working pressure	Connections	Weight
					kg
LD25 Oil injection lubricator	89010676	22.5Ltr	25bar	3" BSP	70
LD60 Oil injection lubricator	89010677	58Ltr	25bar	4" BSP	100
LD60C Oil injection lubricator / Air manifold combo unit	88053137	58Ltr	25bar	5 x 2" Inlets 1 x 4" BSP outlet	200



LARGE DTH ACCESSORIES

To complement the large DTH range of equipment and complete the “ total package “ we have an offering of accessories to ensure our equipment runs to its full potential.



LUBRICATION

The correct quality and quantity of lubrication to a large DTH hammer is crucial to the performance and life of the tool. We have proven this time and time again with our Atlas Copco Rock Drill Oil and it is the only lubricant we use in our rental hammers. The Rock Drill Oil is based on renewable raw materials, completely environmentally safe and biodegradable. A must for marine projects.

Description	Product No.	Weight
		kg
20Ltr Pail	89010563	20
205Ltr Drum	89010564	205



PORTABLE BUTTON BIT GRINDING UNIT

To optimise the performance and life of large DTH Button bits it is advisable to keep them in good order. The grinding unit allows you to dress the carbides on site without stripping the bit out of the hammer.

Description	Product No.	Weight
		kg
Secoroc Grind Matic HG	87002435	3
19mm Grinding cups, spherical	87004558	
Grinder holder unit c/w lubricator, regulator & fittings	89010564	15



WATER INJECTION PUMPS

Water Injection is sometimes required when using large DTH hammers for dust suppression or introducing additives. Our bespoke range of injection units can be easily fed into the air supply with a Y-piece or through inlets on our oiler injection manifolds.



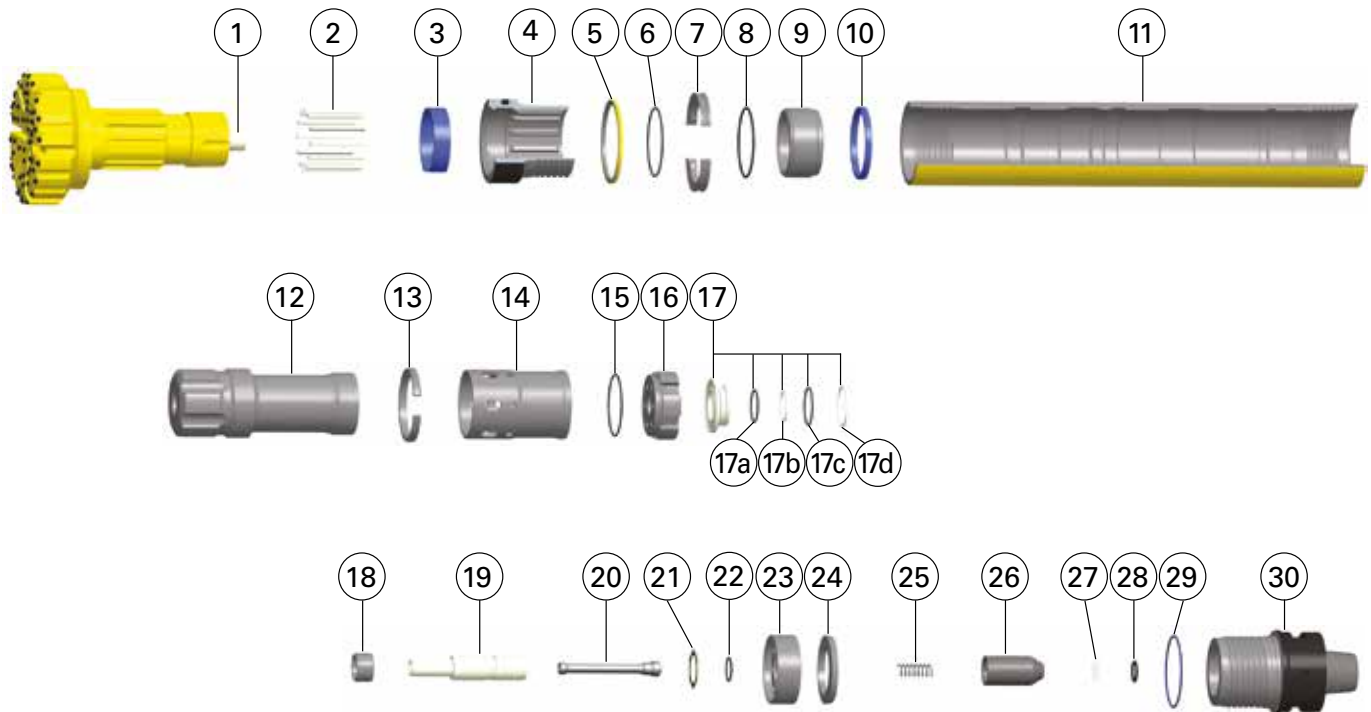
SCORPION HYDRAULIC BREAKOUT / MAKE UP WRENCH

Servicing large DTH hammers can be challenging. We have found the Scorpion wrench to be a good solution for on site and in the workshop.

Description	Product No.	Weight
		kg
QL 120 Scorpion package	On request	600
QL 200 Scorpion package	On request	910
QL 200S Scorpion package	On request	945

SECOROC QL 120

DOWN-THE-HOLE HAMMER



Ref.	Part	Prod. No.	Product code
1	Exhaust tube	52342094	9326-52342094
2	Drive pins 12pc's required (sold as each)	52107604	9712-QL-00-000-65-00D-061
3	Chuck bearing	52105699	9712-QL-00-000-65-000-060
4	Chuck QL120	52105632	9712-QL-00-000-65-00D-001
4	Chuck QL120 Slim	52131992	9712-QL-00-000-65-S0D-001
4	Chuck QL120 for solid breakout washer	52346699	9712-QL-00-000-65-0WE-001
4	Chuck QL120 for Delrin breakout washer	52352218	9712-QL-00-000-65-00E-001
4	Chuck QL120 Retrieval R4	52354643	9712-QL-DH-000-65-00R-001
5	Breakout washer solid (used in both ends)	52346665	9712-QL-00-000-00-0WW-053
5	Breakout washer Delrin (chuck side only)	52352200	9712-QL-00-000-00-00W-053
6	O-ring* (Bit retaining ring)	95379350	9712-QL-00-000-00-000-035
7	Bit retaining ring	52105640	9712-QL-00-000-65-000-002
8	O-ring* (Bit bearing)	52107422	9712-QL-00-000-00-000-023
9	Bit bearing	52287562	9712-QL-00-000-65-000-022
10	Lock ring (Bit bearing)	52105657	9712-QL-00-000-00-000-058
11	Casing QL120	52105616	9712-QL-00-000-00-000-004
11	Casing QL120 Slim	52131984	9712-QL-00-000-00-S00-004
12	Piston	52105509	9712-QL-00-000-65-000-005
13	Lock ring (Cylinder)	52105681	9712-QL-00-000-00-000-048
14	Cylinder	52105541	9712-QL-00-000-00-000-062
15	O-ring* (Air distributor)	95379350	9712-QL-00-000-00-000-035
16	Air distributor	52105525	9712-QL-00-000-00-000-042
17	Valve assembly	52116209	9712-QL-00-000-00-000-A45
17a	O-ring (Valve)	N/A	N/A
17b	Seal-ring (Valve)	N/A	N/A
17c	O-ring (Valve)	N/A	N/A
17d	Seal-ring (Valve)	N/A	N/A
18	Sleeve	52105608	9712-QL-00-000-00-000-091
19	Distributor guide	89010385	9712-QL-00-000-00-0H0-046
20	Guide liner	52105556	9712-QL-00-000-00-000-052
21	Valve shim .025"	52127594	9712-QL-00-000-00-000-072

Ref.	Part	Prod. No.	Product code
22	O-ring* (Valve cap)	95087086	9712-QL-00-000-00-000-034
23	Valve cap	52105533	9712-QL-00-000-00-000-074
24	Belleville spring	52105590	9712-QL-00-000-00-000-013
25	Spring (Check valve)	51989259	9712-QL-00-000-00-000-016
26	Check valve assembly with O-ring	89010386	9712-QL-00-000-00-0H0-A17
27	Choke plug solid**	51991305	9720-QL-00-000-00-000-180
27	Choke plug 3/8" **	51991313	9720-QL-00-000-00-000-181
27	Choke plug 1/2" **	51991321	9720-QL-00-000-00-000-182
28	O-ring* (Check valve)	52097896	9712-QL-00-000-00-000-018
29	O-ring* (Backhead)	95402913	9712-QL-00-000-00-000-019
30	Backhead QL 120 STD 6 5/8" API Reg Pin	52105624	9712-QL-00-18P-00-000-020
30	Backhead QL 120 Slim 6 5/8" API Reg Pin	52138393	9712-QL-00-18P-00-S00-020
30	Backhead QL 120 BO 6 5/8" API Reg Pin	52346681	9712-QL-00-18P-00-0W0-020
30	Backhead QL 120 HC 6 5/8" API Reg Pin	89010524	9712-QL-00-18P-00-0H0-20
	Separator O-Ring Part	89011086	0663-89011086
	Separator (HC only)	89010525	9712-QL-00-000-00-0H0-081
	Preload O-ring (HC only)	95087250	9712-QL-00-000-00-0H0-069
	Separator O-ring (HC only)	95086781	9712-QL-00-000-00-0H0-078
	Check seal (HC only)	52107257	9712-QL-00-000-00-0H0-073

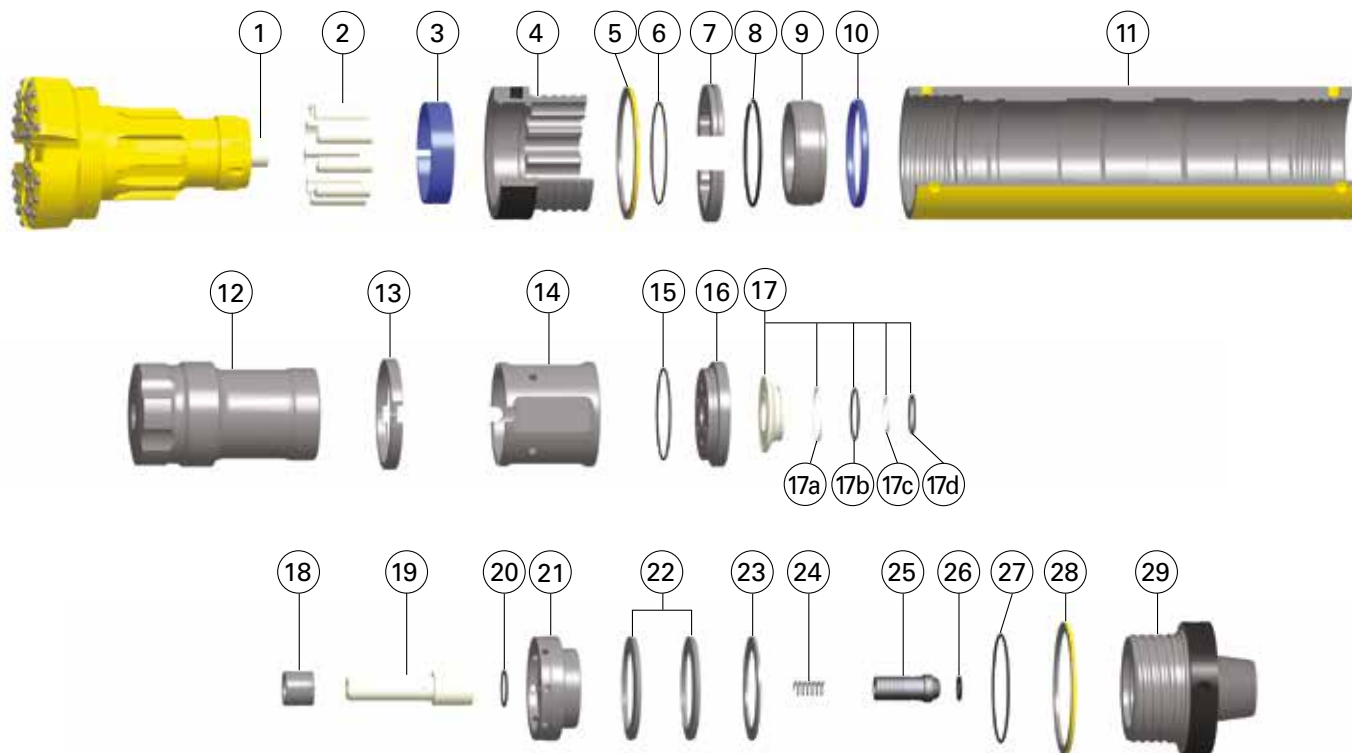
*O-rings not sold separately. Included in different kits, see table.

**Item 27: Choke plug 1/4" and choke plug 1/8" may be used to bypass more air to reduce pressure and/or increase bailing velocity.

Hammers and Kits	Prod. No.	Product code
QL 120 STD, 6 5/8" API Reg Pin	52107448	9712-QL-00-18P-65-000
QL 120 Slim, 6 5/8" API Reg Pin	52138385	9712-QL-00-18P-65-S00
QL 120 BO Solid both ends, 6 5/8" API Reg Pin	52350725	9712-QL-00-18P-65-0WW
QL 120 BO Delrin chuck only, 6 5/8" API Reg Pin	52352226	9712-QL-00-18P-65-00W
QL 120 HC, 6 5/8" API Reg Pin	52107455	9712-QL-00-18P-65-0H0
QL 120 Retrieval R4, 6 5/8" API Reg Pin	52107620	9712-QL-DH-18P-65-00R
QL 120 Retrieval R4 HC, 6 5/8" API Reg Pin	52133501	9712-QL-DH-18P-65-0HR
E-kit QL 120	N/A	N/A
Sustainability kit incl. item 6, 8, 15, 17, 22, 28, 29	52354648	9712-QL-00-000-00-000-070

SECOROC QL 200, QL 200S

DOWN-THE-HOLE HAMMER



Ref.	Part	Prod. No.	Product code
1	Exhaust tube	51989432	9324-51989432
2	Drive pins, 9pc's required for QL 200, 12pc's for QL 200 S, Sold as each	51989424	9720-QL-00-000-67-00D-061
3	Chuck bearing	51989416	9720-QL-00-000-67-000-060
3	Chuck bearing QL 200 S	52124880	9720-QL-00-000-68-00S-060
4	Chuck QL 200	51989390	9720-QL-00-000-67-00D-001
4	Chuck QL 200 S	89010026	9720-QL-00-000-68-00S-001
5	Breakout washer solid (used in both ends)	52342250	9720-QL-00-000-00-0WW-053
5	Breakout washer laminated (chuck side only)	52342227	9720-QL-00-000-00-00W-055
5	Thrust/Breakout washer (chuck side QL 200 S only)	89010027	9720-QL-00-000-00-00W-057
6	O-ring (Bit retaining ring)	95451233	9720-QL-00-000-00-000-035
7	Bit retaining ring	51989382	9720-QL-00-000-67-000-002
8	O-ring (Bit bearing)	51989481	9720-QL-00-000-00-000-023
9	Bit bearing	52133543	9720-QL-00-000-67-000-022
10	Lock ring (Bit bearing)	52342177	9720-QL-00-000-00-000-064
11	Casing	52286507	9720-QL-00-000-00-000-004
12	Piston	52286515	9720-QL-00-000-67-000-005
13	Lock ring (Cylinder)	51989333	9720-QL-00-000-00-000-062
14	Cylinder	51989457	9720-QL-00-000-00-000-048
15	O-ring (Air distributor)	95451233	9720-QL-00-000-00-000-034
16	Air distributor	52097045	9720-QL-00-000-00-000-042
	Air distributor and Guide assembly (incl item 16,18,19)	52098761	9720-QL-00-000-00-000-A42
17	Valve assembly	52098753	9720-QL-00-000-00-000-A45
17a	O-ring (Valve)	N/A	N/A
17b	Seal-ring (Valve)	N/A	N/A
17c	O-ring (Valve)	N/A	N/A
17d	Seal-ring (Valve)	N/A	N/A

Ref.	Part	Prod. No.	Product code
18	Sleeve	52097037	9720-QL-00-000-00-000-091
19	Distributor guide	52097029	9720-QL-00-000-00-000-046
20	O-ring (Valve cap)	95136818	9720-QL-00-000-00-000-029
21	Valve cap	52097052	9720-QL-00-000-00-000-074
22	Belleville spring, qty required 2 ea	51989283	9720-QL-00-000-00-000-013
23	Belleville spacer	52098860	9720-QL-00-000-00-000-072
24	Spring (Check valve)	51989259	9720-QL-00-000-00-000-016
25	Check valve assembly with O-ring	51989739	9720-QL-00-000-00-000-A17
	Choke plug solid*, not shown	51991305	9720-QL-00-000-00-000-180
	Choke plug 3/8" *, not shown	51991313	9720-QL-00-000-00-000-181
	Choke plug 1/2" *, not shown	51991321	9720-QL-00-000-00-000-182
26	O-ring (Check valve)	52097896	9720-QL-00-000-00-000-018
27	O-ring (Backhead)	95018347	9720-QL-00-000-00-000-019
28	Breakout washer solid (used in both ends)	52342250	9720-QL-00-000-00-0WW-053
29	Backhead QL 200 / QL 200 S, 8 5/8" API Reg Pin	51989218	9720-QL-00-63P-00-000-020
	Solid shim, not shown	51989275	9720-QL-00-000-00-000-075

*Item 25: Choke plug 1/4" and choke plug 1/8" may be used to bypass more air to reduce pressure and/or increase bailing velocity.

Hammers and Kits	Prod. No.	Product code
QL 200, 8 5/8" API Reg Pin	52286523	9720-QL-00-63P-67-0WWW
QL 200 S, 8 5/8" API Reg Pin	52286531	9720-QL-00-63P-68-0WS
E-kit QL 200 / QL 200 S	N/A	N/A
Chuck QL 200 S assembly (incl item 3, 4, 5)	89010028	9720-QL-00-000-68-00S-A01
Lifting bail	50780170	9720-QL-00-000-00-000-092

LARGE DTH – USEFUL INFORMATION

DRILLING PARAMETERS

There are many variables to take into account before understanding the correct parameters required. We advise gathering as much information as possible before making judgment. Below are some very rough “rule of thumb” guidelines to work from. We strongly suggest contacting us to discuss these before drilling commences.

WEIGHT ON BIT (WOB)

Starting Point: 9kg per mm of bit
500lbs per inch of bit

Note: Drill string weights and ground conditions need to be taken in to account.

ROTATION (RPM)

Starting Point: 1.6 x Penetration rate per hour in metres
½ x Penetration rate per hour in feet

Note: This will need adjusted to suit the ground conditions.

TORQUE REQUIREMENT (NM / FT/LBS)

Bit size	Nm	ft/lbs
10" (254mm)	2,750	2,028
12" (305mm)	6,800	5,015
20" (508mm)	10,900	8,039
22" (559mm)	13,600	10,031
24" (610mm)	16,500	12,170
30" (762mm)	27,250	20,099
36" (914mm)	38,000	28,027
43" (1092mm)	55,000	40,566
48" (1219mm)	69,000	50,892

Note: This is just a guideline and torque requirement will vary with in hole conditions.

QL 120 AIR CONSUMPTION

Volume		@	Pressure
cfm /	m ³ /min		psi / bar
804 /	6.9	@	100 / 6.9
1248 /	35.3	@	150 / 10.3
1680 /	47.5	@	200 / 13.8
2100 /	59.3	@	250 / 17.2

QL 200 AIR CONSUMPTION

Volume		@	Pressure
cfm /	m ³ /min		psi / bar
1584 /	44.7	@	100 / 6.9
2470 /	69.8	@	150 / 10.3
3389 /	95.7	@	200 / 13.8
4341 /	122.6	@	250 / 17.2

LUBRICATION

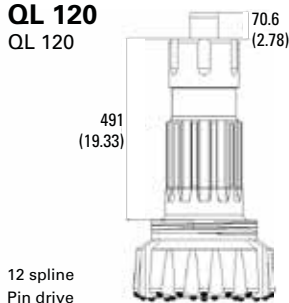
Recommended oil injection rates	
Size	Quantity
10" Hammer	3.5ltr per hour
12" Hammer	4.5ltr per hour
20" Hammer	10ltr per hour
24" Hammer	12ltr per hour
30" Hammer	19ltr per hour

Note: This may need to be adjusted if water and additives are being injected.

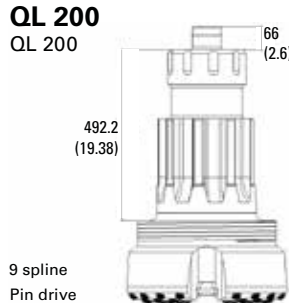
UP HOLE VELOCITY:

$$UHV = \frac{CFM \times 183.4 \text{ or } L/Sec \times 76404.7}{\text{Hole dia} \times \text{Hole dia} - \text{Rod dia} \times \text{Rod dia.}}$$

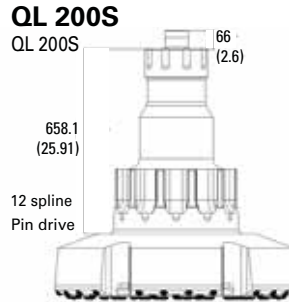
QL 120
QL 120



QL 200
QL 200



QL 200S
QL 200S



Sustainable Productivity

We stand by our responsibilities towards our customers,
towards the environment and the people around us.
We make performance stand a test of time.
This is what we call - Sustainable Productivity.

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