



**Secoroc Rock Drilling Tools**

## ***DOWN-THE-HOLE DRILL STRINGS***

Secoroc high quality DTH drill string equipment for Atlas Copco water well drill rigs:

**T2W, T3W/T3WDH,  
TH60/TH60DH, T4W, T4WDH**

**Atlas Copco**

# Atlas Copco waterwell drill rigs

For over 100 years Atlas Copco drills have had a major impact on the drilling community worldwide and have set the standard for quality, longevity, reliability and performance.

The T2W is a PTO (Power Take Off) truck mounted rig. While the T2W has evolved over the years to stay current with the markets requirements it still maintains its rapid robust feed system and ability to carry water injection, mud system and air on-board the rig. The T2W comes complete with pipe box and carousel to carry up to 150m (500ft) with the drill rig.

Now the mainstay of the Waterwell range the T3W/TH60 still derive their roots from the original cyclone design with the carousel integrated into the tower. As with the T2W both units carry all options on-board and have the ability to carry nearly 180m (600ft) of drill pipe combine in the carousel and pipe box.

Developed in 1968 the T4W started a revolution in the air drilling with its large deck engine to drive a 'big air' package. The T4W is still viewed as the workhorse in the range.

T2W			T3W		T3WDH	
Rig data	metric	imperial	metric	imperial	metric	imperial
Derrick/feed length	6,4 m	21 ft	8,3 m	27 ft 4 in	8,3 m	27 ft 4 in
Pull back	13600 kg	30000 lb	18100 kg	40000 lb	31700 kg	70000 lb
Pull down	13600 kg	30000 lb	11300 kg	25000 lb	13600 kg	30000 lb
Hole range	110-203 mm	4 5/16 in - 8 in	105-254 mm	4 1/8 in - 10 in	105-254 mm	4 1/8 in - 10 in
Hole depth*	360 m	1200 ft	450 m	1500 ft	915 m	3000 ft
Spindle thread connection	API 4" IF BOX		API 3 1/2" IF PIN		API 3 1/2" IF PIN	
Spindle sub length (s/s) mm, in	1778 mm	70 in	1016 mm	40 in	1016 mm	40 in
Spindle sub threads opt. 1	API 4" IF PIN x API 2 3/8" IF PIN		API 3 1/2" IF BOX x API 2 7/8" IF PIN		API 3 1/2" IF BOX x API 2 7/8" IF PIN	
Spindle sub threads opt. 2	API 4" IF PIN x API 2 7/8" IF PIN		API 3 1/2" IF BOX x API 3 1/2" Reg PIN		API 3 1/2" IF BOX x API 3 1/2" Reg PIN	
Spindle sub threads opt. 3	-		API 3 1/2" IF BOX x API 3 1/2" IF PIN		API 3 1/2" IF BOX x API 3 1/2" IF PIN	
Air capacity						
Compressor opt. 1	189 l/s / 14 bar	500 cfm / 200 psi	423 l/s / 24,1 bar	900 cfm / 350 psi	423 l/s / 24,1 bar	900 cfm / 350 psi
Compressor opt. 2	330 l/s / 21 bar	750 cfm / 300 psi	505 l/s / 24,1 bar	1070 cfm / 350 psi	505 l/s / 24,1 bar	1070 cfm / 350 psi
Compressor opt. 3	423 l/s / 24,1bar	900 cfm / 350 psi	-	-	-	-
Drill string						
DTH hammer size	4/5/6/8"		4/5/6/8"		4/5/6/8"	
Design group for pipes	TH60		TH60		TH60	
Pipe configuration	PIN down		PIN down		PIN down	
Pipe length	6,1 m	20 ft	6,1 m	20 ft	6,1 m	20 ft
Pipe OD	89 mm, 114 mm	3 1/2 in, 4 1/2 in	89 mm, 114 mm	3 1/2 in, 4 1/2 in	89 mm, 114 mm	3 1/2 in, 4 1/2 in
Thread connection						
Pipe – Thread option A	API 2 3/8" IF		API 2 3/8" IF		API 2 3/8" IF	
Pipe – Thread option B	API 2 7/8" IF		API 2 7/8" IF		API 2 7/8" IF	
Pipe – Thread option C	-		API 3 1/2" Reg		API 3 1/2" Reg	

\*Hole depths are for indication only. Weight of drill string and geological conditions will determine maximum depth.

\*\*Worm gear head is designed with intergrated floating spindle.

# Atlas Copco waterwell drill rigs

The purpose of this brochure is to assist our customers in selecting the most suitable Rock Drilling Tools for their specific demand. Most of the equipment displayed in this brochure will work for both Rotary and down-the-hole (DTH) drilling. The main focus is on down-the-hole drill strings though. Don't hesitate to contact your Atlas Copco representative with any questions related to this brochure.

This brochure covers drill string and accessories for DTH drilling with following drill rigs:  
**T2W, T3W, T3W DH, TH60, TH60 DH  
 T4W, T4W DH**



T4W		T4WDH		TH60		TH60DH	
metric	imperial	metric	imperial	metric	imperial	metric	imperial
10,1 m	33 ft 3 in	10,1 m	33 ft 3 in	8,3 m	27 ft 4 in	8,3 m	27 ft 4 in
22700 kg	50000 lb	31800 kg	70000 lb	18100 kg	40000 lb	31800 kg	70000 lb
13600 kg	30000 lb	13600 kg	30000 lb	11300 kg	25000 lb	13600 kg	30000 lb
140–254 mm	5 ½ in – 10 in	140–254 mm	5 ½ in – 10 in	105–254 mm	4 1/8 in – 10 in	105–254 mm	4 1/8 in – 10 in
550 m	1800 ft	915 m	3000 ft	450 m	1500 ft	915 m	3000 ft
API 4" IF BOX		API 4" IF BOX		API 3 ½" IF PIN		API 3 ½" IF PIN	
482 mm (Spur gear head)	19 in	482 mm (Spur gear head)	19 in	1016 mm	40 in	1016 mm	40 in
381 mm (Worm gear head**)	15 in	381 mm (Worm gear head**)	15 in	API 3 ½" IF BOX x API 2 7/8" IF PIN		API 3 ½" IF BOX x API 2 7/8" IF PIN	
API 4" IF PIN x API 2 7/8" IF BOX		API 4" IF PIN x API 2 7/8" IF BOX		API 3 ½" IF BOX x API 3 ½" Reg PIN		API 3 ½" IF BOX x API 3 ½" Reg PIN	
API 4" IF PIN x API 3 ½" Reg BOX		API 4" IF PIN x API 3 ½" Reg BOX		API 3 ½" IF BOX x API 3 ½" IF PIN		API 3 ½" IF BOX x API 3 ½" IF PIN	
–		–		–		–	
505 l/s / 24,1 bar	1070 cfm / 350 psi	505 l/s / 24,1 bar	1070 cfm / 350 psi	423 l/s / 24,1 bar	900 cfm / 350 psi	505 l/s / 24,1 bar	1070 cfm / 350 psi
590 l/s / 24,1 bar	1250 cfm / 350 psi	590 l/s / 24,1 bar	1250 cfm / 350 psi	505 l/s / 24,1 bar	1070 cfm / 350 psi	–	–
–	–	–	–	–	–	–	–
5/6/8/12"		5/6/8/12"		4/5/6/8"		4/5/6/8"	
T4		T4		TH60		TH60	
PIN up		PIN up		PIN down		PIN down	
7,6 m	25 ft	7,6 m	25 ft	6,1 m	20 ft	6,1 m	20 ft
114 mm	4 ½ in	114 mm	4 ½ in	89 mm, 114 mm	3 ½ in, 4 ½ in	89 mm, 114 mm	3 ½ in, 4 ½ in
API 2 7/8" IF		API 2 7/8" IF		API 2 3/8" IF		API 2 3/8" IF	
API 3 ½" Reg		API 3 ½" Reg		API 2 7/8" IF		API 2 7/8" IF	
–		–		API 3 ½" Reg		API 3 ½" Reg	



**It is worth remembering that a great deal of the world's geology is not suitable for drilling with Down-The-Hole-hammers (DTH), as they may be too soft, unstable, or might just be easier not to drill with DTH.**

In such circumstances it will be necessary to go back to basics and drill with rotary drilling techniques. This uses a number of different bit-types, to chew, grind, shear or agitate the formations, depending on the formation type. As you can imagine, bit selection is quite critical to optimizing the rig's capabilities and achieving maximum penetration rates. It is also very important to select the correct Bottom Hole Assembly (BHA) for hole straightness and choose the correct flushing medium to ensure bit cooling, hole stability and cleaning is maintained.

# Rotary drilling

The following information is for guidance only and you should always contact an Atlas Copco Specialist before final selections are made.

## Tricone Drill Bits

Invented by Howard Hughes, the three cones interact with one another to reduce the formation into suitably sized pieces so that they can be flushed clear of the borehole.

Tricones fall into two main categories – Mill Tooth and Tungsten Carbide Insert (TCI).

Mill Tooth cones are literally cut from a cone of steel, with different tooth lengths and spacings, depending on the formations to be drilled. Predominantly used in sedimentary formations.



TCI bits have inserts placed into the steel cones (similar to DTH Bits), the size and shape of the inserts, dictating the kind of formations to be drilled. Often used for drilling harder igneous formations, especially with hemi-spherical inserts.



Both types of tricones require much greater bit loadings than is normally associated with DTH

drilling; insufficient bit loading will produce low penetration rates and lead to premature bearing failure. This means that the BHA needs to match the bit type, formation and rig capabilities. Rotary drilling also requires significantly higher torque, which increases hole deviation, so again the BHA plays a significant role in how well the hole drills.

## Drag bits

Dragbits are very simple, having no moving parts and are exceptionally good in soft (clays, mudstones) and unconsolidated (sands, gravels) formations. Requiring far less bit weight than tricones they are more suitable for smaller rigs, much less expensive and often overlooked.



## PDC bits

Polycrystalline Diamond Compact (PDC) bits are high tech versions of traditional drag bits, extensively used in oil and gas drilling with mud motors for steering directionally drilled wells.



Atlas Copco can supply a large range of rotary drilling bits and accessories, but again it needs to be stressed that careful selection is essential and that as much information needs to be gathered as is possible and then call in the services of one of Atlas Copco's bit specialists.

# BHA - Bottom Hole Assembly

## Deep hole drilling

Our definition of a deep hole is a hole being drilled to 300 m (1000 ft) or deeper. There are several applications where a deep hole is required, such as shallow oil and gas, large sized water wells, dewatering projects and geothermal applications to name a few.

## How to successfully drill a deep hole

The deeper the hole gets, the more you need to think and plan regarding how to drill your hole and how to design your drill string.

"Spaghetti drilling" is a term used to describe a situation where the drill string is not under tension and starts to act like wet spaghetti in the hole, causing excessive stress to the tool joints and increase wear to sections of the pipes.

The drill string should be designed with a BHA that provides sufficient weight on bit. A correctly designed BHA will keep the drill pipes in tension at all times during drilling, which is one of the two criteria's needed to successfully drill a deep hole.

The second criteria is to build the BHA with a three point stabilization, ensuring that the BHA is centralized in the hole at all times during drilling.

The BHA is an arrangement of drill collars and stabilizers located in the drill string directly after the DTH hammer or the tricone bit. The sole purpose of the BHA is to provide sufficient weight on bit, to guide the drill string and to minimize the stress on different components in the drill string. This setup ensures that the hole is being drilled with the least possible amount of stress and deviation.

Different applications and hole depths have different needs for how to design your BHA. Typically, water well drilling to depths down to 200 m (650 ft) would only require drill collars in the BHA.

The size of drill collars and stabilizers varies with the size of the hole being drilled. Using a three point stabilizing design is recommended for deep hole drilling, i.e. placing 3 stabilizers in the BHA – One located directly after the DTH-hammer or the tricone bit, one in the middle of the BHA and the last one on top of the last drill collar (see the image on next page).

A properly designed BHA will keep the drill pipes kept in tension at all times during drilling, where the three point stabilization will ensure that the BHA is centered in the hole.

## Drill collars

The purpose of the drill collar is to provide weight on bit. A drill collar is typically made from solid bar where the thread is cut directly on the body. The number of drill collars to use in the BHA is determined by the hole size and the size of the hammer being used.

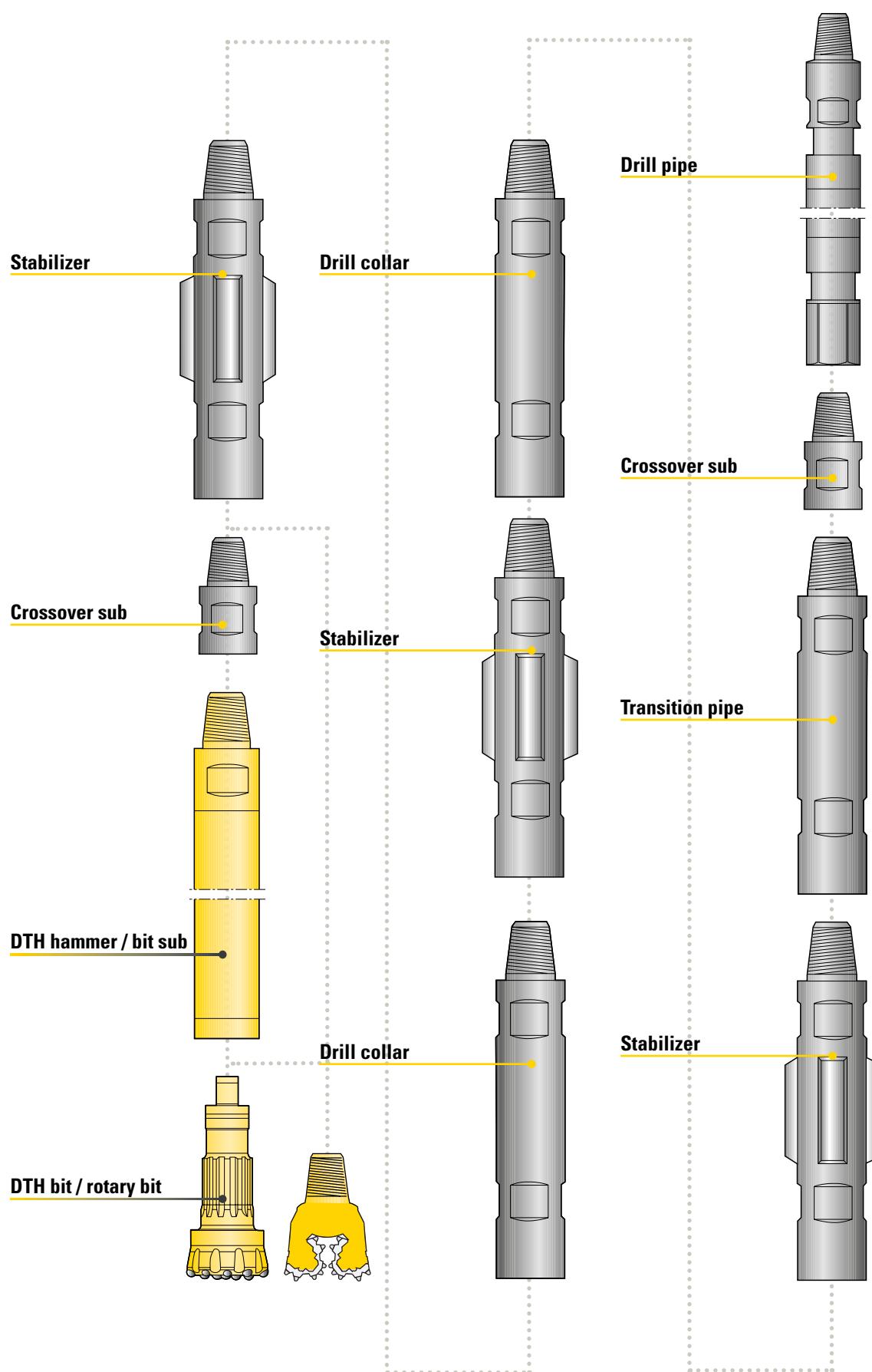
## Stabilizers

The purpose of the stabilizers is to centralize the drill string in the hole and thereby preventing hole deviation. A stabilizer is normally designed to be 3/8" (~9mm) smaller than the bit size. Stabilizers comes in a variety of designs, where both ribbed and spiraled type of stabilizers are commonly used.

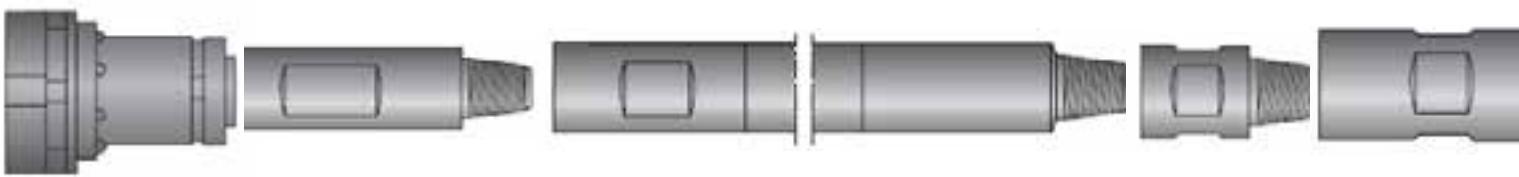
## Transition pipe

A transition pipe is stiffer than a drill pipe, but more flexible than a drill collar. The transition pipe is normally placed between the BHA and the drill pipes, making the drill string more durable and less sensitive for breakage.

# BHA - Bottom Hole Assembly



# Atlas Copco T2W drill rigs



## T2W

### Rotation unit thread connection: API 4" IF BOX

89 mm (3 1/2") OD drill string, API 2 3/8" IF. For 110–152mm (4 5/16"-6") holes				
Spindle options	Saver sub	Drill pipe	Adapter	Drill collar*
<b>Fixed spindle</b> 89 mm (3 1/2 in) API 4" IF PIN x 2 3/8" IF PIN 1778 mm (70 in) N/A <b>57679516</b> <i>ADS Product</i>	Not needed	89 mm (3 1/2 in) API 2 3/8" IF 6,09 m (20 ft) 104 kg (229 lbs) <b>58160896</b> <b>211-089-0609-B48-E0,40-08</b>	Not needed	Not needed
<b>OR</b> <b>Floating spindle</b> 89 mm (3 1/2 in) API 4" IF PIN x 2 3/8" IF BOX 673 mm (26 1/2 in) N/A <b>57881088</b> <i>ADS Product</i>	89 mm (3 1/2 in) API 2 3/8" IF PIN x 2 3/8" IF PIN 1105 mm (43 1/2 in) N/A <b>On request</b> <i>ADS Product</i>	89 mm (3 1/2 in) 2 3/8" IF PIN x 2 3/8" IF PIN 1105 mm (43 1/2 in) N/A - ADS Product	89 mm (3 1/2 in) API 2 3/8" IF BOX x 3 1/2" IF PIN 530 mm (20 7/8 in) 34 kg (75 lbs) <b>58171422</b> <b>311-2089-15-053-01-D48,41</b>	127 mm (5 in) API 3 1/2" IF BOX x PIN 6,09 m (20 ft) 463 Kg (1021 lbs) <b>58219254</b> <b>215-8860-48,55-32</b>

114 mm (4 1/2") OD drill string, API 2 7/8" IF. For 133 - 203mm (5 1/4"-8") holes				
Spindle adapter	Saver sub	Drill pipe	Adapter	Drill collar*
<b>Fixed spindle</b> 114 mm (4 1/2 in) API 4" IF PIN x 2 7/8" IF PIN 1778 mm (70 in) N/A <b>57477630</b> <i>ADS Product</i>	Not needed	114 mm (4 1/2 in) API 2-7/8 IF BOX x PIN 6,09 m (20 ft) 158 kg (348 lbs) <b>57690448</b> <b>213-114-0610-B48-L0,40-08</b>	Not needed	Not needed
<b>OR</b> <b>Floating spindle</b> 89 mm (3 1/2 in) API 4" IF PIN x 2 7/8" IF BOX 673 mm (26 1/2 in) N/A <b>57881088</b> <i>ADS Product</i>	89 mm (3 1/2 in) API 2 7/8" IF PIN x 2 3/8" IF PIN 1105 mm (43 1/2 in) N/A <b>57881096</b> <i>ADS Product</i>	114 mm (5 in) API 2 7/8" IF BOX x 3 1/2" IF PIN 530 mm (20 7/8 in) 37 Kg (82 lbs) <b>58171448</b> <b>313-2114-15-053-01-D48,41</b>	127 mm (5 in) API 3 1/2" IF BOX x PIN 6,09 m (20 ft) 463 Kg (1021 lbs) <b>58219254</b> <b>215-8860-48,55-32</b>	

Up-hole velocity per hole range and compressor size (89mm OD pipes)			
Hole Size	189 l/s / 14 bar (400 cfm / 200 psi)	330 l/s / 21 bar (700 cfm / 300 psi)	424 l/s / 24 bar (900 cfm / 350 psi)
110-130 mm (4 5/16 - 5 1/8 in)	58 - 27 m/s (11 338 - 5 277 fpm)	101 - 47 m/s (19 797 - 9 214 fpm)	129 - 60 m/s (25 436 - 11 838 fpm)
134-152 mm (5 1/4 - 6 in)	24 - 16 m/s (4 722 - 3 121 fpm)	42 - 28 m/s (8 244 - 5 449 fpm)	54 - 36 m/s (10 593 - 7 001 fpm)
152-203 mm (6 - 8 in)	16 - 7 m/s (3 121 - 1 423 fpm)	28 - 13 m/s (5 449 - 2 458 fpm)	36 - 16 m/s (7 001 - 3 193 fpm)

# Atlas Copco T2W drill rigs



Adapter / Bit sub	DTH hammer	DTH bit size	WOB**
89 mm (3 1/2 in) API 2-3/8" Reg BOX x API 2 3/8" IF BOX 508 mm (20 in) 17 kg (37 lbs) <b>58135732</b> <b>311-1089-10-051-01-D00,41</b>	<b>QLX 40</b> 102 mm (4 in) API 2 3/8" Reg PIN 897 mm (35 1/3 in) 46 kg (100 lbs) <b>89010117</b> <b>9704-QX-00-10P-64-000</b>	110 - 130 mm 4 5/16 - 5 1/8 in	1200 kg
89 mm (3 1/2 in) API 3-1/2" Reg BOX x API 2 3/8" IF BOX 508 mm (20 in) 15 kg (33 lbs) <b>58135880</b> <b>311-1089-14-051-01-K48,41</b>	<b>QLX 50</b> 122 mm (4 13/16 in) API 3-1/2" Reg PIN 1061 mm (41 3/4 in) 69 kg (153 lbs) <b>89010092</b> <b>9705-QX-00-14P-64-000</b>	134-152 mm 5 1/4 - 6 in	1500 kg
127 mm (4 3/4 in) API 3 1/2" Reg BOX x 3 1/2" IF BOX 508 mm (20 in) 18 kg (40 lbs) <b>89010494</b> <b>315-1127-14-051-01-K48,41</b>	<b>QLX 60</b> 142 mm (5 19/32 in) API 3 1/2" Reg PIN 1091 mm (42 15/16") 93 kg (205 lbs) <b>52352465</b> <b>9706-QX-00-14P-64-000</b>	152-203 mm 6 - 8 in	2200 kg

## Legend

**Description:**

OD, mm:

Thread:

Length, (s/s):

Weight:

**Prod. No.:**

**Prod. code:**

\* Add quantity of drill collar to match the recommended weight on bit

\*\* Weight On Bit

## Up-hole velocity

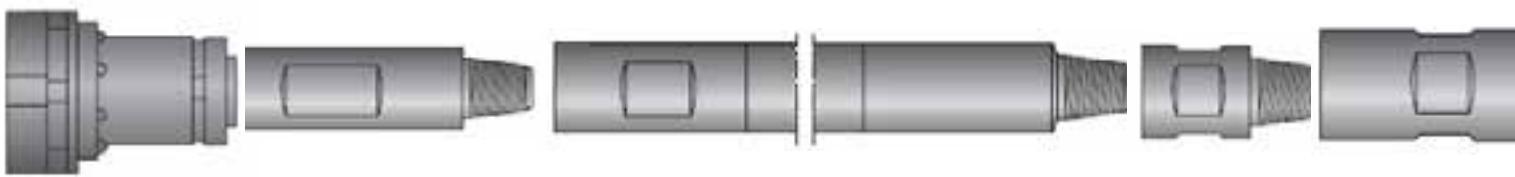
Up-hole velocity depends on available air volume, bit/hole size and pipe OD. The cutting speed should be at least 20 m/s in order to keep the hole clean. A too high speed will result in excessive wear on the drill string. Our recommended up-hole velocity is 30-50 m/s.

Adapter / Bit sub	DTH hammer	DTH bit size	WOB**
114 mm (4 1/2 in) API 3 1/2" Reg BOX x API 2 7/8" IF BOX 508 mm (20 in) 27 kg (60 lbs) <b>58135849</b> <b>313-1114-14-051-01-E48,41</b>	<b>QLX 50</b> 122 mm (4 13/16 in) API 3-1/2" Reg PIN 1061 mm (41 3/4 in) 69 kg (153 lbs) <b>89010092</b> <b>9705-QX-00-14P-64-000</b>	134-152 mm 5 1/4 - 6 in	1500 kg
127 mm (4 3/4 in) API 3 1/2" Reg BOX x 3 1/2" IF BOX 508 mm (20 in) 18 kg (lbs) <b>89010494</b> <b>315-1127-14-051-01-K48,41</b>	<b>QLX 60</b> 142 mm (5 19/32") API 3 1/2" Reg PIN 1091 mm (42 15/16 in) 93 kg (205 lbs) <b>52352465</b> <b>9706-QX-00-14P-64-000</b>	152-203 mm 6 - 8 in	2200 kg

## Up-hole velocity per hole range and compressor size (114mm OD pipes)

Hole Size	189 l/s / 14 bar (400 cfm / 200 psi)	330 l/s / 21 bar (700 cfm / 300 psi)	424 l/s / 24 bar (900 cfm / 350 psi)
110-130 mm (4 5/16 - 5 1/8 in)	N/A	N/A	N/A
134-152 mm (5 1/4 - 6 in)	49 - 24 m/s (9 553 - 4 688 fpm)	85 - 42 m/s (16 680 - 8 185 fpm)	109 - 53 m/s (21 431 - 10 516 fpm)
152-203 mm (6 - 8 in)	24 - 9 m/s (4 688 - 1 679 fpm)	42 - 15 m/s (8 185 - 2 932 fpm)	53 - 19 m/s (10 516 - 3 768 fpm)

# Atlas Copco TH60, T3W drill rigs



## TH60, TH60 DH, T3W, T3W DH

Rotation unit thread connection: API 3-1/2" IF PIN

89mm (3 1/2") OD drill string, API 2 3/8" IF. For 110 - 152mm (4-5/16" - 6.00") holes				
Spindle	Saver sub	Drill pipe	Adapter	Drill collar*
<b>Fixed spindle</b> 89 mm (3 1/2 in) API 3-1/2" IF BOX x 2 3/8" IF PIN 1061 mm (40 in) N/A <b>57679516</b> <i>ADS Product</i>	Not needed	89 mm (3 1/2 in) API 2 3/8" IF 6,09 m (20 ft) 104 kg (229 lbs) <b>58160896</b> <b>211-089-0609-B48-E0,40-08</b>	Not needed	Not needed
<b>OR</b> <b>Floating spindle</b> 89 mm (3 1/2 in) API 3 1/2" IF PIN x 2 3/8" IF BOX 648 mm (25 1/2 in) N/A <b>57735235</b> <i>ADS Product</i>	89 mm (3 1/2 in) API 2 3/8" IF PIN x 2 3/8" IF PIN N/A N/A <b>557922478</b> <i>ADS Product</i>			

114mm (4 1/2") OD drill string, API 2 7/8" IF. For 134 - 222mm (5 1/4" - 8 3/4") holes				
Spindle	Saver sub	Drill pipe	Adapter	Drill collar*
<b>Fixed spindle</b> 114 mm (4 1/2 in) API 3-1/2" IF BOX x 2 7/8" IF PIN 1061 mm (40 in) N/A <b>57699621</b> <i>ADS Product</i>	Not needed	114 mm (4 1/2 in) API 2-7/8 IF BOX x PIN 6,09 m (20 ft) 158 kg (348 lbs) <b>57690448</b> <b>213-114-0610-B48-L0,40-08</b>	Not needed	Not needed
<b>OR</b> <b>Floating spindle</b> 114 mm (4 1/2 in) API 3 1/2" IF PIN x 2 7/8" IF BOX 648 mm (25 1/2 in) N/A <b>57735235</b> <i>ADS Product</i>	114 mm (4 1/2 in) API 2 7/8" IF PIN x 2 7/8" IF PIN 508 mm (20 in) N/A <b>57735243</b> <i>ADS Product</i>	140mm (5 1/2") API 2 7/8" IF BOX x 4" FH PIN 240mm (9 1/2 in) 24 Kg (53 lbs) <b>57620544</b> <b>313-2140-21-024-01-D00,80</b>	140mm (5 1/2") API 4" FH BOX x PIN 6,09 m (20 ft) 604 Kg (1332 lbs) <b>58219262</b> <b>221-8960-48,55-40</b>	

# Atlas Copco TH60, T3W drill rigs



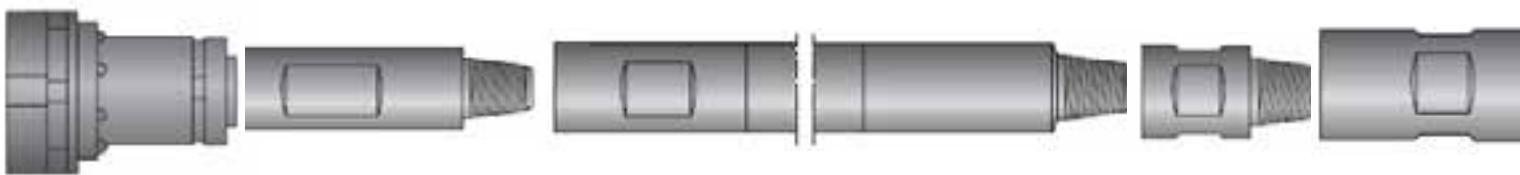
Adapter / Bit sub	DTH hammer	DTH bit size	WOB**
89 mm (3 1/2 in) API 2-3/8" Reg BOX x API 2 3/8" IF BOX 508 mm (20 in) 17kg (37 lbs) <b>58135732</b> <b>311-1089-10-051-01-D00,41</b>	<b>QLX 40</b> 102 mm (4 in) API 2-3/8" Reg PIN 897 mm (35 1/3 in) 46kg (100 lbs) <b>89010117</b> <b>9704-QX-00-10P-64-000</b>	110 - 130 mm 4 5/16 - 5 1/8 in	1 200 kg
89 mm (3 1/2 in) API 3-1/2" Reg BOX x API 2 3/8" IF BOX 508 mm (20 in) 15kg (33 lbs) <b>58135880</b> <b>311-1089-14-051-01-K48,41</b>	<b>QLX 50</b> 122 mm (4 13/16 in) API 3-1/2" Reg PIN 1061 mm (41 3/4 in) 69 kg (153 lbs) <b>89010092</b> <b>9705-QX-00-14P-64-000</b>	134-152 mm 5 1/4 - 6 in	1 500 kg

Legend
<b>Description:</b>
OD, mm:
<b>Thread:</b>
Length, (s/s):
Weight:
<b>Prod. No.:</b>
<b>Prod. code:</b>
* Add quantity of drill collar to match the recommended weight on bit
** Weight On Bit

Adapter / Bit sub	DTH hammer	DTH bit size	WOB**
114 mm (4 1/2 in) API 3 1/2" Reg BOX x API 2 7/8" IF BOX 508 mm (20 in) 27kg (60 lbs) <b>58135849</b> <b>313-1114-14-051-01-E48,41</b>	<b>QLX 50</b> 122 mm (4 13/16 in) API 3-1/2" Reg PIN 1061 mm (41 3/4 in) 69 kg (153 lbs) <b>89010092</b> <b>9705-QX-00-14P-64-000</b>	134-152 mm 5 1/4 - 6 in	1 500 kg
127 mm (4 3/4 in) API 3 1/2" Reg BOX x 3 1/2" IF BOX 508 mm (20 in) 18 kg (40 lbs) <b>89010494</b> <b>315-1127-14-051-01-K48,41</b>	<b>QLX 60</b> 142 mm (5 19/32 in) API 3 1/2" Reg PIN 1091 mm (42 15/16 in) 93 kg (205 lbs) <b>52352465</b> <b>9706-QX-00-14P-64-000</b>	152-203 mm 6 - 8 in	2 200 kg
140 mm (5 1/2 in) API 4 1/2" Reg BOX x 3 1/2" IF BOX 610 mm (24 in) 21 kg (46 lbs) <b>58220039</b> <b>317-1140-15-054-01-D48,80</b>	<b>TD80 Std</b> 181 mm (7 1/8 in) API 4 1/2" Reg PIN 1466 mm (57 11/16 in) 216 kg (476 lbs) <b>52328127</b> <b>9708-QT-00-17P-29-000</b>	200 - 222 mm 7 7/8 - 8 3/4 in	3 000 kg



# Atlas Copco TH60, T3W drill rigs



## TH60, TH60 DH, T3W, T3W DH

Rotation unit thread connection: API 3-1/2" IF PIN

114mm (4 1/2") OD drill string, API 3 1/2" Reg. For 134 - 222mm (5-1/4" - 8-3/4") holes				
Spindle adapter	Saver sub	Drill pipe	Adapter	Drill collar*
<b>Fixed spindle adapter</b> 114 mm (4 1/2 in) API 3-1/2" IF BOX x 3 1/2 Reg PIN 1061 mm (40 in) N/A <b>57867160</b> <i>ADS Product</i>	Not needed	114 mm (4 1/2 in) API 3 1/2" Reg BOX x PIN 6,09 m (20 ft) 156 kg (344 lbs) <b>58160912</b> <b>214-114-0609-B48-E0,40-08</b>	Not needed	Not needed
			127 mm (5 in) API 3 1/2" Reg BOX x 3 1/2" IF PIN 610 mm (24 in) 65 Kg (143 lbs) <b>52162591</b> <b>314-2140-15-061-01-E00,41</b>	127 mm (5 in) API 3 1/2" IF BOX x PIN 6,09 m (20 ft) 463 Kg (1021 lbs) <b>58219254</b> <b>215-8960-48,55-32</b>
<b>OR</b> <b>Floating spindle adapter</b> 114 mm (4 1/2 in) API 3 1/2" IF PIN x 3 1/2" Reg BOX 648 mm (25 1/2 in) 76 kg (168 lbs) <b>92004334</b> <i>Secoroc Product</i>	114 mm (4 1/2 in) API 3 1/2" Reg PIN x 3 1/2" Reg PIN 508 mm (20 in) 43 kg (67 lbs) <b>92004487</b> <i>Secoroc Product</i>	140mm (5 1/2") API 3 1/2" Reg BOX x 4"FH PIN 270 mm (10 5/8 in) 30 Kg (66 lbs) <b>52165610</b> <b>314-2140-21-027-11-K00,80</b>	140mm (5 1/2") API 4" FH BOX x PIN 6,09 m (20 ft) 604 Kg (1332 lbs) <b>58219262</b> <b>221-8960-48,55-40</b>	140mm (5 1/2") API 4" FH BOX x PIN 6,09 m (20 ft) 604 Kg (1332 lbs) <b>58219262</b> <b>221-8960-48,55-40</b>



# Atlas Copco TH60, T3W drill rigs



Adapter / Bit sub	DTH hammer	DTH bit size	WOB**
114 mm (4 1/2 in) API 3 1/2" Reg BOX x BOX 508 mm (20 in) 27 kg (60 lbs) <b>58135823</b> <b>314-1114-14-051-01-E48,41</b>	<b>QLX 50</b> 122 mm (4 13/16 in) API 3 1/2" Reg PIN 1061 mm (41 3/4 in) 69 kg (153 lbs) <b>89010092</b> <b>9705-QX-00-14P-64-000</b>	134-152 mm 5 1/4 - 6 in	1 500 kg
127 mm (4 3/4 in) API 3 1/2" Reg BOX x 3 1/2" IF BOX 508 mm (20 in) 18 kg (40 lbs) <b>89010494</b> <b>315-1127-14-051-01-K48,41</b>	<b>QLX 60</b> 142 mm (5 19/32 in) API 3 1/2" Reg PIN 1091 mm (42 15/16 in) 93 kg (205 lbs) <b>52352465</b> <b>9706-QX-00-14P-64-000</b>	152-203 mm 6 - 8 in	2 200 kg
140 mm (5 1/2 in) API 4 1/2" Reg BOX x 3 1/2" IF BOX 610 mm (24 in) 21 kg (46 lbs) <b>58220039</b> <b>317-1140-15-054-01-D48,80</b>	<b>TD80 Std</b> 181 mm (7 1/8 in) API 4 1/2" Reg PIN 1466 mm (57 11/16 in) 216 kg (476 lbs) <b>52328127</b> <b>9708-QT-00-17P-29-000</b>	200 - 222 mm 7 7/8 - 8 3/4 in	3 000 kg

## Legend

**Description:**

OD, mm:

Thread:

Length, (s/s):

Weight:

**Prod. No.:**

**Prod. code:**

\* Add quantity of drill collar to match the recommended weight on bit

\*\* Weight On Bit

## Up-hole velocity

Up-hole velocity depends on available air volume, bit/hole size and pipe OD. The cutting speed should be at least 20 m/s in order to keep the hole clean. A too high speed will result in excessive wear on the drill string. Our recommended up-hole velocity is 30-50 m/s.

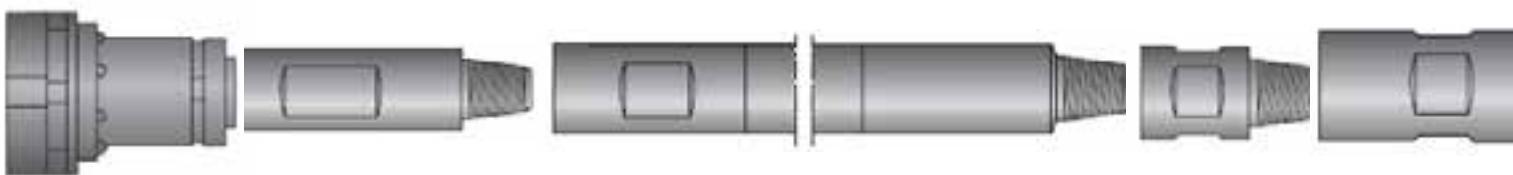
### Up-hole velocity per hole range and compressor size (89mm OD pipes)

Hole Size	423 l/s / 24,1 bar (900 cfm / 350 psi)	505 l/s / 24,1bar (1070 cfm / 350 psi)
134-152 mm (5 1/4 - 6 in)	54 - 35 m/s (10 568 - 6 985 fpm)	64 - 42 m/s (12 616 - 8 339 fpm)

### Up-hole velocity per hole range and compressor size (114mm OD pipes)

Hole Size	423 l/s / 24,1 bar (900 cfm / 350 psi)	505 l/s / 24,1bar (1070 cfm / 350 psi)
134-152 mm (5 1/4 - 6 in)	190 - 53 m/s (21 380 - 10 491 fpm)	130 - 64 m/s (25 525 - 12 525 fpm)
152-203 mm (6 - 8 in)	53 - 19 m/s (10 491 - 3 759 fpm)	64 - 23 m/s (12 525 - 4 487 fpm)
200-222 mm (7 7/8 - 8 3/4 in)	20 - 15 m/s (3 927 - 2 922 fpm)	24 - 18 m/s (4 688 - 3 489 fpm)

# Atlas Copco T4W drill rigs



## T4W, T4W DH

Rotation unit thread connection: API 4" IF BOX

114 mm (4 1/2") OD drill string, API 2 7/8" IF. For 134–254mm (5 1/4" - 10.00") holes			
Spindle	Drill pipe	Adapter	Drill collar*
<b>Fixed spindle (Spur gear head)</b> 114 mm (4 1/2 in) API 4" FH PIN x 2 7/8" IF BOX 483 mm (19 in) 51 kg (112 lbs) <b>57093171</b> <b>ADS Product</b>	114 mm (4 1/2 in) API 2-7/8 IF BOX x PIN 7,62 m (25 ft) 187 kg (412 lbs) <b>52202033</b> <b>213-114-0762-B45-D0,40-08</b>	Not needed	114 mm (4 1/2 in) API 2-7/8 IF BOX x PIN 7,62 m (25 ft) 298 kg (657 lbs) <b>52202454</b> <b>213-114-0762-B45-D0,55-16</b>
<b>Floating spindle (Worm gear head)</b> 114 mm (4 1/2 in) API 4" FH PIN x 2 7/8" IF BOX 381 mm (15 in) 55 kg (121 lbs) <b>52211638</b> <b>ADS Product</b>		140 mm (5 1/2 in) API 4" FH BOX x 2-7/8" IF PIN 610 mm (24 in) 37 kg (82 lbs) <b>52215456</b> <b>321-2140-13-061-01-D00,80</b>	140 mm (5 1/2 in) API 4" FH BOX x PIN 7015 mm (23 ft) 730 kg (1609 lbs) <b>52266160</b> <b>213-114-0762-B45-D0,55-16</b>

# Atlas Copco T4W drill rigs



Adapter / Bit sub	DTH hammer	DTH bit size	WOB**
114 mm (4 1/2 in) API 3 1/2" Reg BOX x API 2 7/8" IF PIN 610 mm (24 in) 39 Kg (86 lbs) <b>52224300</b> <b>314-2114-13-061-01-E00,41</b>	<b>QLX 50</b> 122 mm (4 13/16 in) API 3 1/2" Reg PIN 1061 mm (41 3/4 in) 69 kg (153 lbs) <b>89010092</b> <b>9705-QX-00-14P-64-000</b>	134-152 mm 5 1/4 - 6 in	1500 kg
140 mm (5 1/2 in) API 4" FH PIN x 3 1/2" Reg BOX 610 mm (24 in) 65 Kg (143 lbs) <b>92003775</b> <b>314-2140-21-061-03-E45,82</b>	<b>QLX 60</b> 142 mm (5 19/32 in) API 3 1/2" Reg PIN 1091 mm (42 15/16 in) 93 kg (205 lbs) <b>52352465</b> <b>9706-QX-00-14P-64-000</b>	152-203 mm 6 - 8 in	2200 kg
140 mm (5 1/2 in) API 4" FH PIN x 4 1/2" Reg BOX 610 mm (24 in) 57 kg (126 lbs) <b>50624105</b> <b>317-2140-21-061-11-E48,80</b>	<b>TD80 Std</b> 181 mm (7 1/8 in) API 4 1/2" Reg PIN 1466 mm (57 11/16 in) 216 kg (476 lbs) <b>52328127</b> <b>9708-QT-00-17P-29-000</b>	200-254 mm 7 7/8 - 10 in	3000 kg
197mm (7 3/4") API 4" FH PIN x 6-5/8" Reg BOX 610 mm (24 in) 90 Kg (198 lbs) <b>50624097</b> <b>318-2197-19-061-11-E48,80</b>	<b>QL 120 Std</b> 285 mm (11 1/4 in) API 6-5/8" Reg PIN 1837 mm (72 5/16 in) 650 kg (1433 lbs) <b>52107448</b> <b>9712-QL-00-18P-65-000</b>	311-560 mm 12 1/4 - 22 1/16 in	4000 kg

Legend
<b>Description:</b>
OD, mm:
Thread:
Length, (s/s):
Weight:
<b>Prod. No.:</b>
<b>Prod. code:</b>
* Add quantity of drill collar to match the recommended weight on bit
** Weight On Bit



# Atlas Copco T4W drill rigs



## T4W, T4W DH

Rotation unit thread connection: API 4" IF BOX

114mm (4 1/2") OD drill string, API 3 1/2" Reg. For 134-54mm (5 1/4" - 10.00") holes			
Spindle	Drill pipe	Adapter	Drill collar*
<b>Fixed spindle (Spur gear head)</b> 114 mm (4 1/2 in) API 4" FH PIN x 3 1/2" Reg BOX 483 mm (19 in) 51 kg (112 lbs) <b>52150422</b> <i>ADS Product</i>	114 mm (4 1/2 in) API 3 1/2" Reg BOX x PIN 7,62 m (25 ft) 187 kg (412 lbs) <b>50425859</b> <b>214-114-0762-B45-D0,40-08</b>	Not needed	114 mm (4 1/2 in) API 3 1/2" Reg BxP 7,62 m (25 ft) 365 kg (805 lbs) <b>50262187</b> <b>214-114-0762-B45-D0,A-16</b>
<b>Floating spindle (Worm gear head)</b> 114 mm (4 1/2 in) API 4" FH PIN x 3 1/2" Reg BOX 381 mm (15 in) 23 kg (51 lbs) <b>52162302</b> <i>ADS Product</i>		140 mm (5 1/2 in) API 4" FH BOX x 3-1/2" Reg PIN 610 mm (24 in) 39 kg (86 lbs) <b>52145265</b> <b>321-2140-14-061-01-D00,80</b>	140 mm (5 1/2 in) API 4" FH BOX x PIN 7015 mm (23 ft) 730 kg (1609 lbs) <b>52266160</b> <b>213-114-0762-B45-D0,55-16</b>

# Atlas Copco T4W drill rigs



Adapter / Bit sub	DTH hammer	DTH bit size	WOB**
Not needed	<b>QLX 50</b> 122 mm (4 13/16 in) API 3-1/2" Reg PIN 1061 mm (41 3/4 in) 69 kg (153 lbs) <b>89010092</b> <b>9705-QX-00-14P-64-000</b>	134-152 mm 5 1/4 - 6 in	1 500 kg
	<b>QLX 60</b> 142 mm (5 19/32 in) API 3 1/2" Reg PIN 1091 mm (42 15/16 in) 93 kg (205 lbs) <b>52352465</b> <b>9706-QX-00-14P-64-000</b>	152-203 mm 6 - 8 in	2 200 kg
140 mm (5 1/2 in) API 4" FH PIN x 4 1/2" Reg BOX 610 mm (24 in) 57 kg (126 lbs) <b>50624105</b> <b>317-2140-21-061-11-E48,80</b>	<b>TD 80 Std</b> 181 mm (7 1/8 in) API 4 1/2" Reg PIN 1466 mm (57 11/16 in) 216 kg (476 lbs) <b>52328127</b> <b>9708-QT-00-17P-29-000</b>	200-254 mm 7 7/8 - 10 in	3 000 kg
197mm (7 3/4") API 4" FH PIN x 6-5/8" Reg BOX 610 mm (24 in) 90 Kg (198 lbs) <b>50624097</b> <b>318-2197-19-061-11-E48,80</b>	<b>QL 120 Std</b> 285 mm (11 1/4 in) API 6-5/8" Reg PIN 1837 mm (72 5/16 in) 650 kg (1433 lbs) <b>52107448</b> <b>9712-09-50-00</b>	311-560 mm 12 1/4 - 22 1/16 in	4 000 kg

Legend
<b>Description:</b>
OD, mm:
Thread:
Length, (s/s):
Weight:
<b>Prod. No.:</b>
<b>Prod. code:</b>
* Add quantity of drill collar to match the recommended weight on bit
** Weight On Bit

Up-hole velocity
Up-hole velocity depends on available air volume, bit/hole size and pipe OD. The cutting speed should be at least 20 m/s in order to keep the hole clean. A too high speed will result in excessive wear on the drill string. Our recommended up-hole velocity is 30-50 m/s.

Up-hole velocity per hole range and compressor size (114mm OD pipes)		
Hole Size	505 l/s / 24,1bar (1070 cfm / 350 psi)	590 l/s / 24,1bar (1250 cfm / 350 psi)
134-152 mm (5 1/4 - 6 in)	130 - 64 m/s (25 525 - 12 525 fpm)	152 - 74 m/s (29 821 - 14 633 fpm)
152-203 mm (6 - 8 in)	64 - 23 m/s (12 525 - 4 487 fpm)	74 - 27 m/s (14 633 - 5 243 fpm)
200-254 mm (7 7/8 - 10 in)	24 - 12 m/s (4 688 - 2 457 fpm)	28 - 15 m/s (5 477 - 2 871 fpm)

# Secoroc DTH rock drilling tools

## Down-the-hole hammers

Description	Product No	Product code	Thread connection	Outside diameter		Rec. Hole size		Shank style	Length without bit, s-s		Weight without bit	
				mm	inch	mm	inch		mm	inch	kg	lbs
<b>4"</b>												
QLX 40	89010117	9704-QX-00-10P-64-000	API 2-3/8" Reg PIN	102	4	110-130	4 5/16 - 5 1/8	QLX 40	897	35 1/3	46	100
QL 340	92050412	9704-QL-00-10P-34-000	API 2-3/8" Reg PIN					QL 340			41	
COP 44	89000482	9704-CO-00-10P-34-000	API 2-3/8" Reg PIN	98	3 7/8	110 - 125	4 5/6 - 4 15/16	DHD 340	1034	40 11/16	38	84
<b>5"</b>												
QLX 50	89010092	9705-QX-00-14P-64-000	API 3-1/2" Reg PIN	122	4 13/16	133 - 152	5 1/4 - 6	QL 50	1061	41 3/4	69	153
COP 54	89000481	9705-CO-00-14P-37-000	API 3-1/2" Reg PIN	120	4 3/4	134 - 152	5 1/4 - 6	DHD 350	1145	45	57	126
COP 54 GOLD	89001243	9705-CG-00-14P-25-000	API 3-1/2" Reg PIN	120	4 3/4	134 - 152	5 1/4 - 6	QL 50	1194	47	66	146
<b>6"</b>												
QLX 60	52352465	9706-QX-00-14P-64-000	API 3-1/2" Reg PIN	142	5 9/16	152 - 191	6 - 7 1/2	QL 60	1091	43	93	205
QL 60	52324258	9706-QL-00-14P-26-000	API 3-1/2" Reg PIN	138	5 7/16	152 - 191	6 - 7 1/2	QL 60	1132	44 4/7	91	201
QL 60	52315116	9706-QL-00-13P-26-000	API 2 7/8" IF PIN	138	5 7/16	152 - 191	6 - 7 1/2	QL 60	1132	44 4/7	91	201
COP 64	89000486	9706-CO-00-14P-59-000	API 3-1/2" Reg PIN	142	5 9/16	156 - 178	6 1/8 - 7	DHD 360	1308	51 1/2	95	209
COP 64 GOLD	89000959	9706-CG-00-14P-26-000	API 3-1/2" Reg PIN	142	5 9/16	156 - 178	6 1/8 - 7	QL 60	1258	49 1/2	96	212
<b>8"</b>												
TD 80 STD	52328127	9708-QT-00-17P-29-000	API 4 1/2" Reg PIN	181	7 1/8	200 - 305	7 7/8 - 12	QL 80	1466	57 2/3	216	476
QL 80 STD	52083623	9708-QL-00-17P-29-000	API 4 1/2" Reg PIN	181	7 1/8	200 - 305	7 7/8 - 12	QL 80	1461	57 1/2	203	448
QL 80 HYDRO-CYCLONE	52083656	9708-QL-00-17P-29-0H0	API 4 1/2" Reg PIN	181	7 1/8	200 - 305	7 7/8 - 12	QL 80	1567	61 2/3	203	448
<b>12"</b>												
QL 120 STD	52107448	9712-09-50-00	API 6-5/8" Reg PIN	285	11 1/4	311 560	12 1/4 - 22 1/16	QL 120	1837	72 1/3	650	1433

Other hammer executions / thread connections are available.

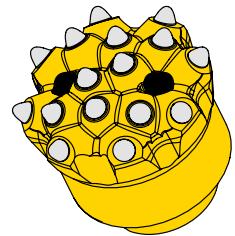
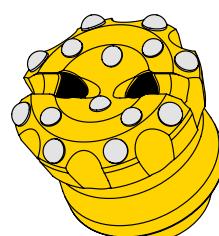
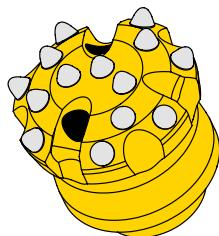
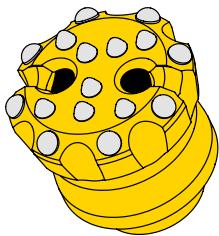
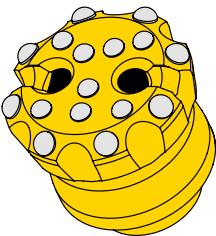


## Guide to hammer features

STD	Standard	Standard hammer
QM	Quarry Mining	Designed for mining, back reaming buttons and thick casing
DH	Deep Hole	Designed for deep hole drilling
OG	Oil &Gas	Designed for oil and gas drilling
BO	Break out washers	Equipped with breakout washers in both ends

# Secoroc DTH rock drilling tools

## Secoroc drill bits – standard assortment



### Flat front

**Applications:**  
Hard and abrasive formations, all round.  
**Typical formations:**  
Granite, hard limestone, basalt.

### SpeedBit

**Applications:**  
Medium hard to hard and abrasive formations. For higher productivity.  
**Design feature:**  
Ballistic buttons in front.  
**Typical formations:**  
Granite, hard limestone, basalt.

### Convex front, ballistic

**Applications:**  
Soft to medium hard rock. Non abrasive formations. High penetration rate.  
**Typical formations:**  
Limestone, hard limestone, shale.

### Concave front

**Applications:**  
Medium hard to hard formations. Less abrasive, fractured formations. Excellent control over hole deviation.  
**Design feature:**  
HD - larger gauge buttons. DGR - double (overlapping) gauge row. Only from 8".  
**Typical formations:**  
Granite, hard limestone, basalt.

### Rocket bit

**Applications:**  
Soft to medium hard formations. For exceptional productivity. Fractured rock.  
**Design feature:**  
Spherical buttons for hard and abrasive formations.  
Ballistic buttons for soft formations.  
**Typical formations:**  
Limestone, hard limestone.

## Drill bits for QLX 40 (TD 40 shank)

Diameter		Product No.	Product code	Weight approx	
mm	Inch			kg	lbs
<b>FLAT FRONT</b>					
110	4 5/16	90516005	100-5110-64-1210,10-20	9	20
115	4 1/2	90516006	100-5115-64-1210,10-20	9	21
120	4 3/4	90516506	100-5120-64-1210,10-20	10	21
125	4 15/16	90516227	100-5125-64-1210,10-20	10	22
130	5 1/8	90516007	100-5130-64-1218,10-20	10	23
<b>SPEEDBIT</b>					
110	4 5/16	90003521	100-5110-64-1250,10-20	9	20
115	4 1/2	90516008	100-5115-64-1250,10-20	9	21
120	4 3/4	90516516	100-5120-64-1250,10-20	10	21
125	4 15/16	90516364	100-5125-64-1250,10-20	10	22
130	5 1/8	90516365	100-5130-64-1250,10-20	10	22
<b>CONCAVE</b>					
115	4 1/2	90003644	100-5115-64-0210,10-20	9	20
121	4 3/4	90516009	100-5121-64-0210,10-20	9	21
<b>ROCKET BIT - BALLISTIC</b>					
110	4 5/16	90516010	100-5110-64-623A,10-20	9	19
115	4 1/2	90516011	100-5115-64-623A,10-20	9	19
<b>FOOT VALVE</b>		90516004	9115		
<b>ASSEMBLY TOOL</b>		90516013	9141		

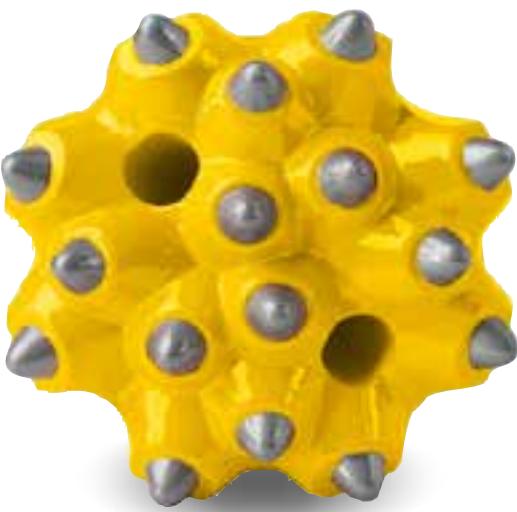
## Drill bits for QLX 50 (QL 50 shank)

Diameter		Product No.	Product code	Weight approx	
mm	Inch			kg	lbs
<b>FLAT FRONT</b>					
130	5 1/8	90515102	100-5130-25-1218,10-20	16	35
134	5 1/4	90514420	100-5134-25-1218,10-20	16	36
140	5 1/2	90514382	100-5140-25-1218,10-20	17	37
149	5 7/8	90515091	100-5149-25-1218,10-20	17	38
152	6	90514958	100-5152-25-1217,10-20	18	39
<b>SPEEDBIT</b>					
134	5 1/4	90514674	100-5134-25-1248,10-20	16	36
140	5 1/2	90514386	100-5140-25-1248,10-20	17	37
<b>CONCAVE</b>					
130	5 1/8	90514422	100-5130-25-0218,10-20	16	35
134	5 1/4	90514424	100-5134-25-0218,10-20	16	36
140	5 1/2	90514387	100-5140-25-0218,10-20	16	36
146	5 3/4	90514484	100-5146-25-0217,10-20	17	38
149	5 7/8	90515089	100-5149-25-0217,10-20	18	39
152	6	90514974	100-5152-25-0217,10-20	18	39
<b>CONVEX BALLISTIC</b>					
130	5 1/8	90515517	100-5130-25-2339,10-20	16	35
140	5 1/2	90515424	100-5140-25-2339,10-20	16	36
140	5 1/2	90515428	100-5140-25-2337,10-20	16	36
146	5 3/4	90514713	100-5146-25-2338,10-20	17	38
<b>FOOT VALVE</b>		90515427	9257		
<b>ASSEMBLY TOOL</b>		89000993	9190		

# Secoroc DTH rock drilling tools

## Drill bits for QLX 60 & TD 70 (QL 60 shank)

Diameter		Product No.	Product code	Weight approx	
mm	Inch			kg	lbs
<b>FLAT FRONT</b>					
152	6	90515694	100-5152-26-1217,08-20	22	49
156	6 1/8	90515691	100-5156-26-1217,08-20	23	50
159	6 1/4	90515688	100-5159-26-1217,08-20	23	50
165	6 1/2	90515613	100-5165-26-1217,08-20	24	53
171	6 3/4	90515595	100-5171-26-1211,08-20	25	55
203	8	90514314	100-5203-26-1211,08-20	32	70
<b>SPEEDBIT</b>					
156	6 1/8	90515705	100-5156-26-1247,08-20	23	50
165	6 1/2	90515609	100-5165-26-1241,08-20	24	54
171	6 3/4	90515710	100-5171-26-1241,08-20	25	55
<b>CONCAVE</b>					
152	6	90515677	100-5152-26-0217,08-20	22	49
156	6 1/8	90515684	100-5156-26-0217,08-20	22	49
159	6 1/4	90515673	100-5159-26-0217,08-20	23	50
165	6 1/2	90515598	100-5165-26-0211,0820	24	53
171	6 3/4	90515621	100-5171-26-0211,08-20	24	53
171	6 3/4	90515662	100-5171-26-0212,08-20	25	55
203	8	90515013	100-5203-26-0411,08-20	35	78
<b>CONVEX BALLISTIC</b>					
165	6 1/2	90515641	100-5165-26-2337,08-20	24	52
171	6 3/4	90515635	100-5171-26-232b,08-20	25	54
203	8	90514850	100-5203-26-2231,08-20	35	78
<b>CONVEX SPHERICAL</b>					
165	6 1/2	90515652	100-5165-26-221b,08-20	24	54
171	6 3/4	90515634	100-5171-26-231b,08-20	25	54
<b>FOOT VALVE</b>	90514253	9283			
<b>ASSEMBLY TOOL</b>	89001189	9170			



## Drill bits for TD 80 (QL 80 shank)

Diameter		Product No.	Product code	Weight approx	
mm	Inch			kg	lbs
<b>FLAT FRONT</b>					
241	9 1/2	90516147	10T-5241-29-121b,08-20	60	132
254	10	90516145	10T-5254-29-1213,08-20	63	138
<b>CONCAVE</b>					
203	8	90516061	10T-5203-29-021b,08-20	49	107
222	8 3/4	90516067	10T-5222-29-021b,08-20	54	118
225	8 7/8	90516059	10T-5225-29-021b,08-20	54	118
251	9 7/8	90516248	10T-5254-29-021b,08-20	59	130
<b>CONVEX-CONCAVE</b>					
200	7 7/8	90515847	10T-5200-29-421b,08-20	48	107
203	8	90516064	10T-5203-29-421b,08-20	49	107
216	8 1/2	90516070	10T-5216-29-421b,08-20	50	110
219	8 5/8	90516072	10T-5219-29-421b,08-20	51	112
222	8 3/4	90516002	10T-5222-29-421b,08-20	54	120
225	8 7/8	90516003	10T-5225-29-421b,08-20	55	121
254	10	90516150	10T-5254-29-421b,08-20	61	135
279	11	90516243	10T-5279-29-421b,08-20	78	173
305	12	90516231	10T-5305-29-421b,08-20	84	185
<b>FOOT VALVE</b>	90515792	9114			
<b>ASSEMBLY TOOL</b>	90516137	9142			

## Drill bits for QL 120 (QL 120 shank)

Diameter		Product No.	Product code	Weight approx	
mm	Inch			kg	lbs
<b>CONCAVE</b>					
311	12 1/4	52302783	1R0-5311-65-0313,18-A5	202	446
314	12 3/8	52338985	1R0-5314-65-0313,18-A5	203	447
330	13	52131927	10T-5330-65-0313,18-A5	195	431
343	13 1/2	52299088	10T-5343-65-0313,18-A5	201	444
349	13 3/4	52335544	10T-5349-65-0313,18-A5	204	449
375	14 3/4	52346301	10T-5375-65,52346301	239	526
391	15 3/8	52124955	10T-5391-65-031C,18-A5	243	536
343	13 1/2	52299088	10T-5343-65-0313,18-A5	201	444
391	15 3/8	52124955	10T-5391-65-031C,18-A5	243	536
451	17 3/4	52338225	10T-5451-65-0323,18-A5	288	635
457	18	52338563	10T-5457-65-031C,18-A5	287	632
464	18 1/4	52339322	10T-5464-65-031C,18-A5	298	658
508	20	52138278	10T-5508-65-041C,15-A5	342	753
<b>FOOT VALVE</b>	52342094	9326-52342094			
<b>PIN DRIVE</b>	52107604	9310-521107604			

# Secoroc DTH rock drilling tools

## Pipes - Design group TH60 (T2, T3, TH60/75E/100A)

Diameter		Product No.	Product code	Thread Pin/Box	Component	Wall thickness		Length		Wrench flats		Flat location	Hex		Weight	
mm	inch					mm	inch	m	ft	mm	inch		mm	inch	kg	lbs
89	3.50	58160896	211-089-0610-B48-E0,40-08	API 2 3/8" IF	Pipe	9	0,368	6.10	20	70	2.75	Box only	No	No	104	229
114	4.50	58160953	213-114-0610-B48-E0,40-08	API 2 7/8" IF	Pipe	9	0,337	6.10	20	89	3.50	Box only	No	No	156	344
114	4.50	58160912	214-114-0610-B48-E0,40-08	API 3 1/2" Reg	Pipe	9	0,337	6.10	20	89	3.50	Box only	No	No	156	344
114	4.50	57690430	215-114-0610-B48-E0,40-08	API 3 1/2" IF	Pipe	9	0,337	6.10	20	89	3.50	Box only	No	No	156	344

## Pipes - Design group T4 (T4W, T4W DH)

Diameter		Product No.	Product code	Thread Pin/Box	Component	Wall thickness		Length		Wrench flats		Flat location	Hex		Weight	
mm	inch					mm	inch	m	ft	mm	inch		mm	inch	kg	lbs
102	4.00	50350156	212-102-0762-B45-D0,40-08	API 2 7/8" Reg	Pipe	9	0,337	7.62	25	89	3.50	Pin only	89	3.50	191	421
114	4.50	52202033	213-114-0762-B45-D0,40-08	API 2 7/8" IF	Pipe	9	0,337	7.62	25	89	3.50	Pin only	102	4.00	187	412
114	4.50	50425859	214-114-0762-B45-D0,40-08	API 3 1/2" Reg	Pipe	9	0,337	7.62	25	89	3.50	Pin only	102	4.00	187	412
114	4.50	52202454	213-114-0762-B45-D0,55-16	API 2 7/8" IF	Pipe/Collar	16	0,625	7.62	25	89	3.50	Pin only	102	4.00	298	657
114	4.50	50262187	214-114-0762-B45-D0,A-16	API 3 1/2" Reg	Pipe/Collar	16	0,625	7.62	25	89	3.50	Pin only	102	4.00	365	805
127	5.00	50348358	214-127-0762-B45-D0,40-08	API 3 1/2" Reg	Pipe	10	0,375	7.62	25	89	3.50	Pin only	102	4.00	255	562
140	5.50	50426493	221-140-0762-B45-L0,55-12	API 4" FH	Pipe	11	0,415	7.62	25	114	4.50	Pin only	114	4.50	333	734

## Drill collars

Diameter		Product No.	Product code	Thread Pin/Box	Component	Wall thickness		Length		Wrench flats		Flat location	Hex		Weight	
mm	inch					mm	inch	m	ft	mm	inch		mm	inch	kg	lbs
127	5.00	58219254	215-8860-48,55-32	API 3 1/2" IF	Collar	32	1.26	6.10	20	89	3.50	Pin & Box	No	No	463	1021
140	5.50	58219262	221-8960-48,55-40	API 4" FH	Collar	40	1,575	6.10	20	114	4.50	Pin & Box	No	No	604	1332
140	5.50	52266160	221-140-0701-E45-L0,55-41	API 4" FH	Collar	40	1,575	7.02	23	114	4.50	Pin only	114	4.50	730	1609

## Stabilizers

Hole size		OD		Product No.	Product code	Length		Weight		Neck /Body OD		Thread connection			
mm	inch	mm	inch			mm	ft	kg	lbs	mm	inch	Box	Pin		
200	7 7/8	191	7 1/2	57922338	317-S200-21-305-0114-00,Q	3660	12	420	926	114	4 1/2	API 4 1/2" REG	API 4" FH		
200	7 7/8	191	7 1/2	57922387	317-S200-17-305-0140-00,Q	3660	12	360	794	140	5 1/2	API 4 1/2" REG	API 4 1/2" REG		
200	7 7/8	191	7 1/2	57922346	317-S200-21-305-0140-00,Q	6100	20	360	794	140	5 1/2	API 4 1/2" REG	API 4" FH		
200	7 7/8	191	7 1/2	57922387	317-S200-17-305-0140-00,Q	6100	20	360	794	140	5 1/2	API 4 1/2" REG	API 4 1/2" REG		
251	9 7/8	241	9 1/2	57922403	318-S250-18-305-0203-00,Q	3660	12	780	1720	203	8	API 6 5/8" REG	API 6 5/8" REG		
251	9 7/8	241	9 1/2	57922353	318-S251-18-305-0203-00,Q	6100	20	680	1499	203	8	API 6 5/8" REG	API 6 5/8" REG		
311	12 1/4	302	11 7/8	57922411	318-S311-18-3605-0203-00,	3660	12	1050	2315	203	8	API 6 5/8" REG	API 6 5/8" REG		
311	12 1/4	302	11 7/8	57922361	318-S311-18-305-0203-00,Q	6100	20	805	1775	203	8	API 6 5/8" REG	API 6 5/8" REG		
381	15	375	14 3/4	57922379	318-S381-18-305-0203-00,Q	3660	12	1250	2756	203	8	API 6 5/8" REG	API 6 5/8" REG		

## Lifting bails

Thread connection	Product No.	Product code	Class, kg (lbs)
API 2 3/8" Reg	On request	On request	-
API 3 1/2" Reg	50524628	3LB-FL-14-3600	3 600 (7 900)
API 4 1/2" Reg	50524644	3LB-FL-17-3600	3 600 (7 900)
API 6 5/8" Reg	50524669	3LB-FL-18-3600	3 600 (7 900)
API 2 7/8" IF	52162450	3LB-FL-13-3600	3 600 (7 900)
API 4" FH	50624188	3LB-FL-19-3600	3 600 (7 900)

## Lifting plugs

Thread connection	Product No.	Product code	Class, kg (lbs)
API 2 3/8" IF	58055955	3LP-FL-11-16000	16000 (35 000)
API 2 7/8" IF	57757312	3LP-FL-13-16000	16000 (35 000)
API 3 1/2" IF	57769721	3LP-FL-15-16000	16000 (35 000)
API 3 1/2" Reg	58055971	3LP-FL-14-16000	16000 (35 000)
API 4" FH	On request	On request	-

# Secoroc DTH rock drilling tools

## Adapters – Box x Box

Diameter		Product No.	Product code	Length		Thread connection		Flats across		Weight	
mm	inch			mm	inch	Box	Box	mm	inch	kg	lbs
89	3 1/2	58135732	311-1089-10-051-01-D00,41	508	20	API 2-3/8" Reg	API 2 3/8" IF	70	2.75	17	37
89	3 1/2	58135880	311-1089-14-051-01-K48,41	508	20	API 3-1/2" Reg	API 2 3/8" IF	70	2.75	15	33
114	4 1/2	58135849	313-1114-14-051-01-E48,41	508	20	API 3-1/2" Reg	API 2 7/8" IF	89	3.50	27	60
127	4 3/4	92009553	315-1127-14-051-01-L48,82	508	20	API 3-1/2" Reg	API 3-1/2" IF	89	3.50	18	40

## Adapters – Pin x Box

Diameter		Product No.	Product code	Length		Thread connection		Flats across		Weight	
mm	inch			mm	inch	Box	Pin	mm	inch	kg	lbs
114	4 1/2	52224300	314-2114-13-061-01-E00,41	610	24	API 3-1/2" Reg	API 2 7/8" IF	89	3.50	39	86
140	5 1/2	50624105	317-2140-21-061-11-E48,80	610	24	API 4-1/2" Reg	API 4" FH	114	4.50	57	126
140	5 1/2	52145265	321-2140-14-061-01-D00,80	610	24	API 4" FH	API 3-1/2" Reg	114	4.50	39	86
140	5 1/2	92003775	314-2140-21-061-03-E45,82	610	24	API 3-1/2" Reg	API 4" FH	114	4.50	65	143
197	7 3/4	50624097	318-2197-19-061-11-E48,80	610	24	API 6-5/8" Reg	API 4" FH	114	4.50	90	198

## In-line Check valves

Diameter		Product No.	Product code	Length		Thread connection		Flats across		Weight		Air intake configuration
mm	inch			mm	inch	Box	Pin	mm	inch	kg	lbs	
89	3 1/2"	58218744	311-2089-11-030-01-K48,41	300	11 4/5	2 3/8" IF	2 3/8" IF	70	2.75	15	33	PIN down
114	4 1/2"	58218645	313-2114-13-030-01-K48,41	300	11 4/5	2 7/8" IF	2 7/8" IF	89	3.50	18	40	PIN down
114	4 1/2"	52162617	313-2114-13-061-01-H00,41	610	24	API 2 7/8" IF	API 2 7/8" IF	89	3.50	39	86	PIN up
114	4 1/2"	50618297	314-2114-14-061-01-K00,41	610	24	API 3 1/2" REG	API 3 1/2" REG	89	3.50	40	88	PIN up
140	5 1/2"	58218637	315-2140-15-038-01-K48,41	380	15	3 1/2" REG	3 1/2" REG	114	4.50	34	75	PIN down



# Notes

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

# *Sustainable Productivity*

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

**Atlas Copco Secoroc AB**  
Box 521, SE-737 25 Fagersta, Sweden  
Phone: +46 223 461 00  
[www.atlascopco.com](http://www.atlascopco.com)

**Atlas Copco**