

**Atlas Copco** Surface Drill Rigs

# **SmartRig™ ROC D7C, D9C and F9C**



## **Smart up your drilling business**

SmartRig ROC D7C hole range 64 – 115 mm (2½ – 4½")

SmartRig ROC D9C hole range 76 – 115 mm (3 – 4½")

SmartRig ROC F9C hole range 89 – 127 mm (3½ – 5")



# Drill smarter with SmartRig

**Thanks to the SmartRig™ from Atlas Copco you can now drill smarter holes. Each hole you drill saves you time and earns you money.**

With its high shift capacity, low energy consumption and innovative modules that improve productivity, we can safely say that SmartRig is a ground-breaking rig. The options available make it one of the quietest running rigs of its kind, with greatly reduced setup time and efficient high precision drilling – under any conditions.

The unique SmartRig features all add up to a set of tools that enable you to optimize operations, to maintain your competitive edge and maximize profitability. Smarter drilling with SmartRig.

## SmartRig gives you:

- High productivity
- Outstanding safety & ergonomics
- Environmental friendliness
- Excellent documentation of the work progress

### Silenced

The Silenced SmartRig's noise level is approximately 10 dB (A) below that of other rigs on the market, making it one of the world's quietest running rigs.

### ROC Manager

Planning & analysis of drilling and blasting. Design drill patterns, log deviation data and analyse MWD (Measure While Drilling) results.

### Hole navigation

For high precision drilling, fast set-up, monitoring, project integration and control.



**SMARTRIG™**



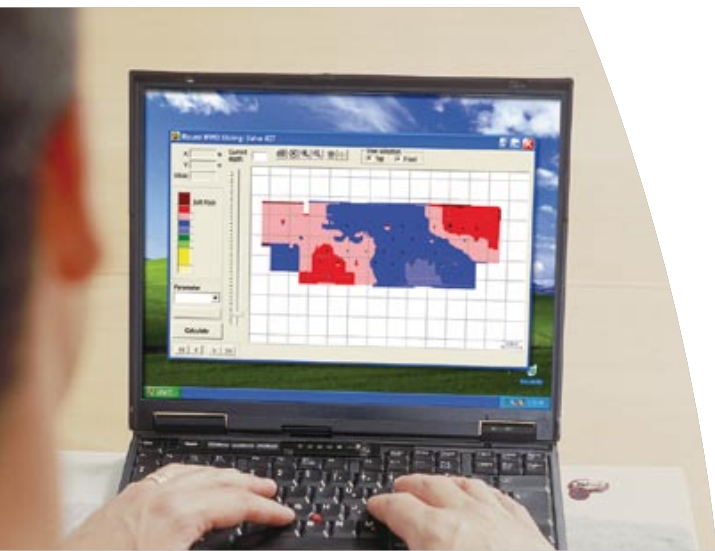
## SmartRig modules

### Hole navigation for accuracy, fast set-up and high precision drilling

The **Hole Navigation System** adds a new dimension to the extensive automation already available on a SmartRig to complete pre-planned drill patterns after initial set-up. All drilling functions are monitored and controlled to provide a record of hole alignment, burden and spacing. Drill rig operations can also be integrated with other equipment such as dozers, dumpers and graders, using the same set-out input data on a common computer system used at the project site.

The precision of the navigation system optimizes drilling and blasting results, improves fragmentation and decreases the amount of explosives needed, substantially lowering your overall production costs. By using hole navigation, you will also profit from reduced setup time and efficient high precision drilling – under any weather conditions. The net result is a significant increase in rig utilization and substantial savings in both time and money.





## Outstanding planning and control with ROC Manager

The **ROC Manager** is, together with the **Hole Navigation System (HNS)**, simply put, your best friend when it comes to planning and control of the drilling and blasting operations. ROC Manager runs on a standard PC and can be used to consolidate data about multiple rigs at multiple sites. You can use ROC Manager to design drill patterns and analyze drilling results.



## Reduced set-up time and increased efficiency with Automatic Feed Alignment & Rod Adding System

SmartRig's **Automatic Feed Alignment** reduces set-up time and cancels out operator error by setting the feed to predefined angles at the touch of a button. The **Automatic Rod Adding System** enables the operator to drill automatically to a given depth, while carrying out other duties such as maintenance checks or grinding bits. The net result is a significant increase – about 10-15 % – in rig utilization. Operation is easy and setup time is reduced.

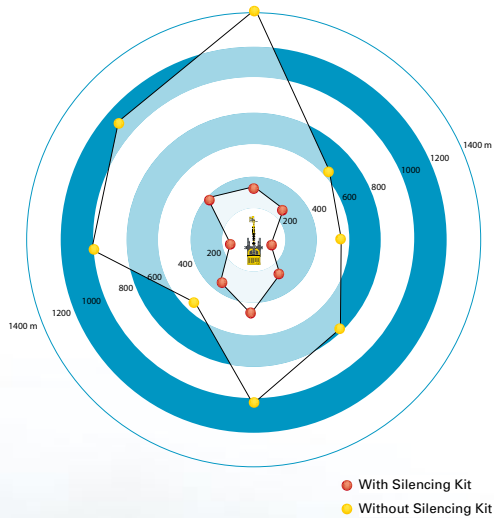


The rig can be equipped with a laser plane receiver that gives you an accurate reference height. All holes can then be drilled to exactly the same depth. There is no need for sight rods or manual marking of bench heights. The advantages of accurately drilling all holes to the same depth are considerable. Overdrilling is not necessary and the costs for secondary breaking, crushing, loading and haulage are considerably reduced.



## Drill anywhere at anytime with the Silenced SmartRig

With a noise level approximately 10 dB (A) below that of other rigs on the market, the **Silenced SmartRig** is one of the worlds quietest running rigs. A perfect choice for civil engineering work sites in restricted urban areas. The advanced silencing system consists of several components which work to reduce the overall noise level. The Silenced version is available for SmartRig ROC D7C and D9C.



### More ground-breaking features ahead

At Atlas Copco, we are continuously innovating to improve your productivity. More additional options to the SmartRig will be available in the future. Keep ahead of the competition with SmartRig.

### Noise level with and without Silencer

The noise mat shows the breakthrough difference of sound level with and without Silencer, and shows that the Silenced SmartRig can work up to 1 km nearer to settlements and buildings. The reference sound level is 55 dB (A). This is a common max sound level (in northern Europe) when drilling close to urban areas. The area should be used as an indication only.



**No matter how you finally decide to equip your SmartRig, every SmartRig delivered from us at Atlas Copco comes with highly intelligent standard equipment. Innovative equipment that has been developed with a focus on improving productivity.**

### **More power with less fuel**

The SmartRig delivers the exact right amount of power for each phase of the drilling operation from its new Stage 3/Tier III engine. This makes it possible to reduce fuel consumption by up to 30 % compared to similar rigs on the market.

### **Increased drilling efficiency**

Using the SmartRig **Rock Drill Control System**, the service life length of drilling consumables, such as the shank adapter and drill steel, increases by more than 20 per cent. The system works by adjusting drilling power to suit the ground conditions, with the three vital control parameters being rotation pressure, drill dampening pressure and penetration rate.

The latter two are factory-set as default values according to the basic rock types: hard, medium or soft. For harder rock, the power is increased automatically. If voids are encountered, the speed is automatically reduced. For softer rock, different levels of control pressures are set. In addition to better economy in consumables, the risk of drill strings getting stuck in blast holes is reduced, resulting in increased rig availability and overall drilling productivity.

### **Superb operator ergonomics and safety**

With the SmartRig control system, electrical signals are generated to control the hydraulic valves. This introduces the concept of a “dry cab”, with no hydraulic pipe work and gauges, considerably reducing both the noise for the operator and the risk of oil leakage. Control gauges and instruments are replaced by a display unit. This releases space in the cab, increases visibility, and improves operator ergonomics.

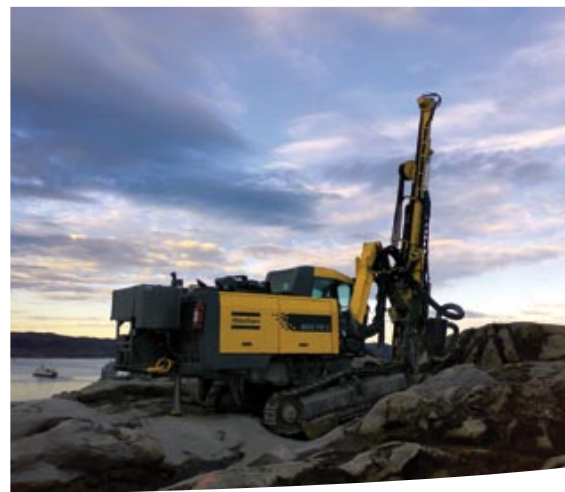
### **Easy maintenance & environmentally friendly**

With 30 % less hoses and hose meters there is less need for maintenance and less risk of spillage, making the SmartRig environmentally friendly. Service is trouble-free with easy fault finding and self diagnostics.



# The SmartRig™ family

The SmartRig comes in three different power classes; all with their unique characteristics, but all featuring the intelligence and efficiency of the SmartRig concept. Contact your local Atlas Copco dealer now for a smarter drilling business.



## SmartRig ROC D7C

A crawler rig with power, flexibility and excellent rough terrain capabilities. Characteristics that elevate surface drilling to impressive new levels of quality, productivity and cost effectiveness. Ideal for construction and quarrying.

## SmartRig ROC D9C

All the advantages of the SmartRig ROC D7C, but with a more powerful rock drill and more flushing air. A perfect choice when taking assignments focused on high productivity.

## SmartRig ROC F9C

A powerful topammer rig with SmartRig intelligence. Its top-of-the-range power and remarkable versatility make the SmartRig ROC F9C ideal for large-scale quarries and construction work.

### Quick facts SmartRig ROC D7C, D9C and F9C

Main application area:	<input type="checkbox"/> DIMENSION STONE INDUSTRY <input checked="" type="checkbox"/> LIMESTONE QUARRIES (mainly ROC F9C)	<input checked="" type="checkbox"/> CONSTRUCTION <input type="checkbox"/> SELECTIVE MINING	<input checked="" type="checkbox"/> AGGREGATE QUARRIES <input type="checkbox"/> OPEN PIT MINING
Drilling method:	<input checked="" type="checkbox"/> TOPHAMMER <input type="checkbox"/> DOWN-THE-HOLE <input type="checkbox"/> COPROD		
Rock drill:	<input type="checkbox"/> ROC D7C <input type="checkbox"/> COP 1840	<input type="checkbox"/> ROC D9C <input type="checkbox"/> COP 2560	<input type="checkbox"/> ROC F9C <input type="checkbox"/> COP 2560
Drill steel:	<input type="checkbox"/> ROC D7C    T38, T45, T51	<input type="checkbox"/> ROC D9C    T45, T51	<input type="checkbox"/> ROC F9C    T45, T51
Hole diameter:	ROC D7C: 64 mm (2½") to 115 mm (4½") ROC D9C: 76 mm (3") to 115 mm (4½") ROC F9C: 89 mm (3½") to 127 mm (5")		
Maximum hole depth:	28 m (92')		
Engine power:	ROC D7C: 168 kW (225 HP) ROC D9C: 168 kW (225 HP) ROC F9C: 224 kW (300 HP)		
rating at 2200 rpm (rpm varies for different type of rigs)			
Rock drill power output:	ROC D7C: 20 kW (26,8 HP) ROC D9C: 25 kW (33,5 HP) ROC F9C: 25 kW (33,5 HP)		

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