THE NEW TUNDO™ RH650 DOWN-THE-HOLE HAMMER ENABLING SKY-HIGH FUEL SAVINGS

SANDVIK

HOW ABOUT SAVING EVERY FIFTH TANK OF DIESEL?

SIMPLY BY CHANGING THE HAMMER

In open-pit mines around the world, large down-the-hole drill rigs are working nonstop 24/7. In this context, the new Tundo™ RH650 DTH hammer pays off quickly, thanks to its highly efficient use of the drill rig's compressed air.

Our field tests – benchmarking our new hammer to a selection of other premium brand down-the-hole hammers – indicate that a drill rig equipped with the Tundo™ DTH hammer consumes up to 32% less diesel. With an average of 20%, this means that every fifth tank of diesel can be saved on every drill rig, by simply changing the hammer.

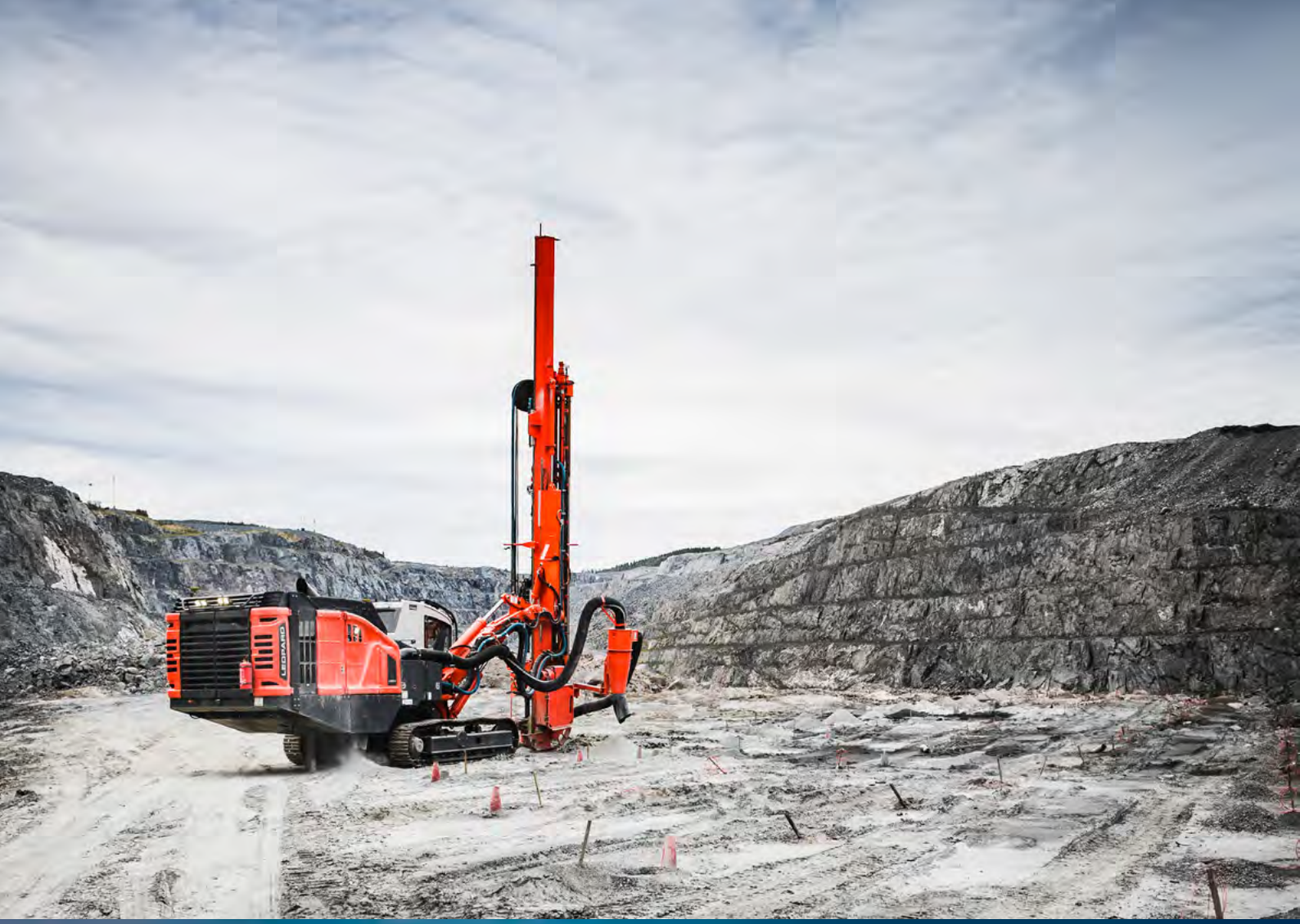
SAVING 3.3 MILLION LITERS OF DIESEL ANNUALLY

The potential savings grow with the size of the drill rig fleet. An average-size mine operated by 15 Sandvik DI650 or equivalent, each running 5,500 hours per year, could reduce their diesel consumption by 3.3 million liters. Thereby also reducing their carbon footprint by 8,580 tons every year – just by changing the hammer.

Imagine what the result would be – for the climate and the mining industry – if every open-pit mining site on the planet decided to replace their current choice of DTH hammers with the Tundo™ DTH hammer.

In the 2020s, mining companies all over the world face major challenges in finding ways to increase efficiency while also minimizing the impact on the climate and environment. As a leading player in the industry, we at Sandvik have a great responsibility. With our resources and technological innovations, we can help make a difference, both in the large and the small. The new Tundo™ RH650 down-the-hole hammer is such an innovation.

3.3 million liters of diesel corresponds to 16,500 drum barrels. Enough to build a tower 1000 meters high – the world's tallest so far.


LEOPARD

WHY OUR NEW HAMMER CAN MAKE YOUR 5" RIGS DO 6" JOBS

Normally, 6" down-the-hole hammers require an airflow of 23–25 m^3 per minute at 24 bar operating pressure. In practice, this means that you need to use a drill rig in the 6" class.

However, the 6" version of the Tundo™ RH650 DTH hammer consumes less than 20 m^3 per minute at 24 bar operating pressure. This means that you can use it with a smaller 5" DTH rig and still maintain the same production rate as you would get with a 6" rig and a standard 6" hammer.

This opens new possibilities for mining companies and drilling contractors to take on bigger drilling jobs with 5" DTH rigs. And also, to consider investing in 5" rigs when it's time to renew the 6" fleet.

KEEP ROP* UP AND TCO** DOWN

Obviously, preforming large drilling jobs equally fast with a smaller drill rig offers a number of potential savings. Firstly, the investment in the machine itself is considerably lower, which both increases your liquidity and reduces your investment cost. Secondly, the fuel cost is reduced because less compressed air is required for the drilling.

This could add up to a considerable sum over time. Exactly how much you can save depends, of course, on many factors, not least which kind of rock you drill in. But each little saving adds up to your bottom line.

*ROP = Rate of Production (Rate of Penetration @ 6-inch)
**TCO = Total Cost of Ownership

With the Tundo™ RH650 DTH hammer, you can use a 5" class rig such as the DI550 (below) rather than a 6" class rig like the DI650 (above) to achieve the same rate of productivity.

TAKE YOUR PRODUCTION RATES TO NEW HEIGHTS

Our new Tundo™ RH650 down-the-hole hammer is designed to give the rig operator the optimal possibility of drilling fast, straight and efficiently, without obstructions or unexpected downtime. This results in more drilled holes per shift at a lower cost per drill meter. Which means more tons of ore produced per day for each drill rig.

The good news for productivity is that our new hammer should also be able to increase your Rate of Penetration by utilizing the air and pressure capacity of the drill rig more efficiently. For the Tundo™ DTH hammer, our goal is set to increase the maximum ROP by up to 20%. This means around 32,000 meters more per year for a 6" drill rig.

If this can be achieved, it corresponds to somewhere between 1,600 and 2,300 more blastholes produced for each of your drill rigs every year. And this is just by changing the hammer.


SAND
6"

OUTSIDE, OUR NEW HAMMER LOOKS QUITE ORDINARY. INSIDE, IT'S A DIFFERENT STORY.

The new Tundo™ DTH hammer is only a small link in the production chain from mine to finished raw material. However, it is uniquely designed to make a big difference, by increasing the mine's output while reducing the operating costs and carbon dioxide emissions for the drill rigs at the same time.

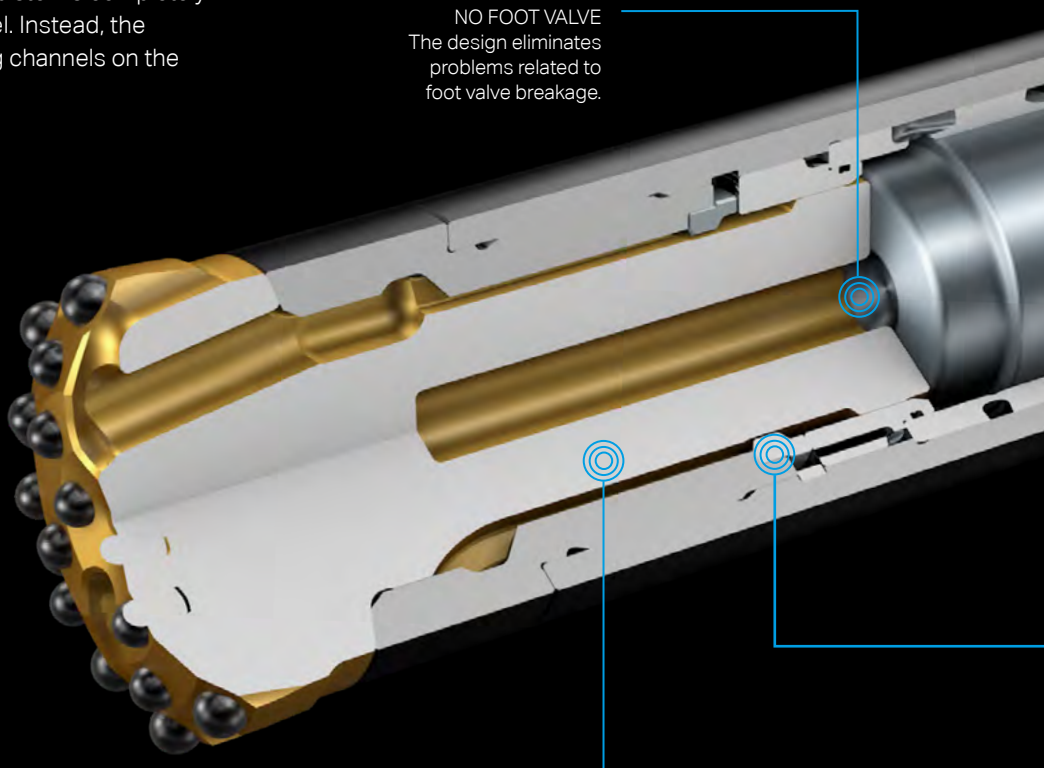
A PATENTED DESIGN THAT MAKES OPTIMAL USE OF COMPRESSED AIR

Uniquely for this DTH hammer, the piston is completely solid without an internal air channel. Instead, the compressed air is conducted along channels on the outside of the piston.

This unique, patented air cycle design makes much more efficient use of each molecule of compressed air, which adds up to a significant increase of the hammer's drilling efficiency.

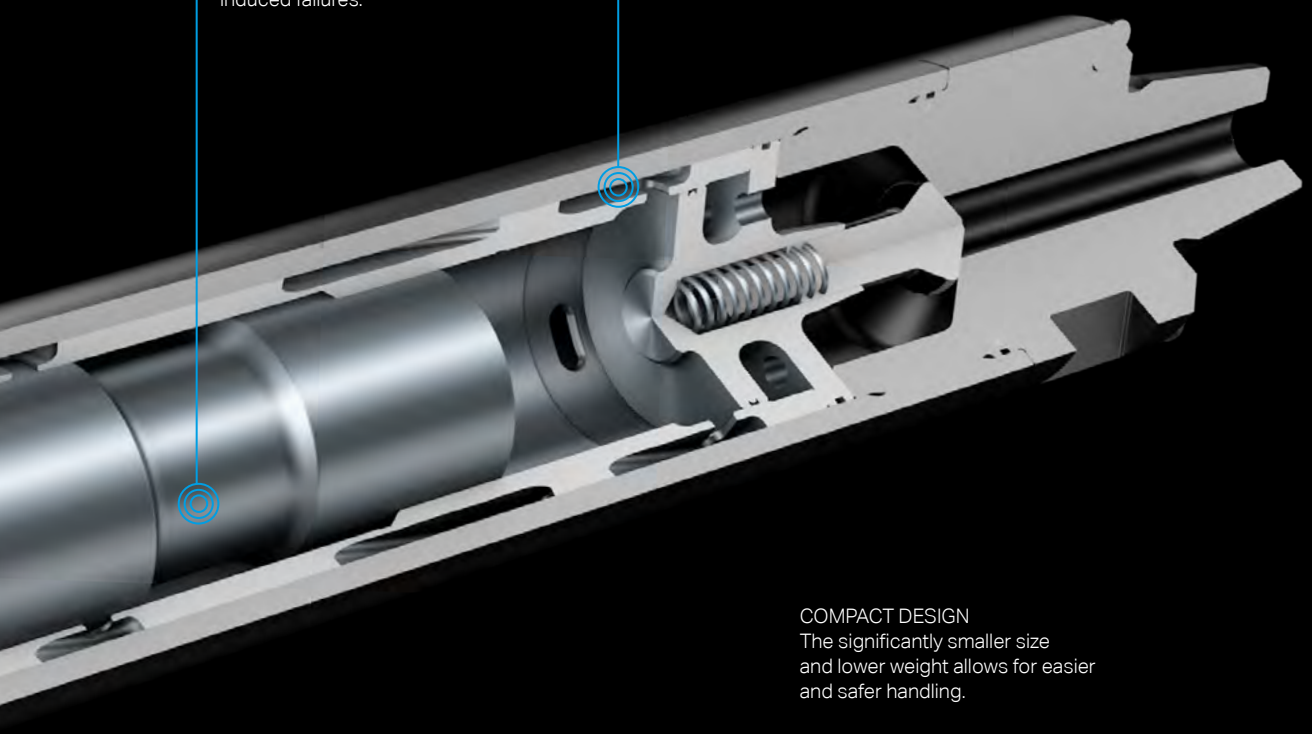
REDUCING STANDSTILLS AND BREAKDOWNS

In addition, the unique design of the airflow also improves the cooling and lubrication of the bit shank, which significantly improves the durability and longevity of the drill bit. This also prevents costly breakdowns and unplanned standstills, both down in the blast holes and in the ore crushers further on.



EFFICIENT AIR CYCLE
The air flow passes on the outside of the inner cylinder. This design provides a more efficient air cycle, which highly improves the drilling efficiency and fuel economy.

SOLID PISTON
A robust piston means reliability. With porting being done externally, the piston is free from cross drilled holes and therefore reduces stress induced failures.



COMPACT DESIGN
The significantly smaller size and lower weight allows for easier and safer handling.

BIT RETAINING SYSTEM
More evenly distributed stress on the retainer shoulder leads to less wear on the bit.

OUR DOWN-THE-HOLE HAMMER RANGE OVERVIEW

RH650

SPEED

AIR EFFICIENCY

SUSTAINABILITY

The new Tundo™ RH650 DTH hammer takes reliability and efficiency to a new level in your surface mining operations. The innovative solid piston and air cycle design enable high performance rates at low air consumption, leading to dramatically lowered drilling costs, fuel burn and carbon footprint.

RH560

SPEED

AIR EFFICIENCY

SUSTAINABILITY

The RH560 DTH hammer has been developed to be a robust and reliable addition to your surface mining and long-haul production drilling operations. It helps you drill faster and lower your drilling cost per hole.

RH510

SPEED

AIR EFFICIENCY

SUSTAINABILITY

The RH510 DTH hammer is engineered for high penetration rates and maximum productivity. This hammer for high performance is the first choice for drilling hard and abrasive rocks.

RH460

SPEED

AIR EFFICIENCY

SUSTAINABILITY

The RH460 DTH hammer has been developed with a focus on improving reliability and economy through cutting air consumption, increasing power and improving lubrication. It gives higher impact energy with lower levels of air consumption, giving high productivity in variable ground conditions.

TUNDO™ RH650 COMPLETE HAMMER

32-6565-GSA-04C

WEIGHT		OUTSIDE DIAMETER		HAMMER LENGTH		HAMMER LENGTH WITH BIT			
						Bit closed		Bit extended	
kg	lb	mm	inch	mm	inch	mm	inch	mm	inch
90	198	152	6.0	911	35.9	978	38.5	1008	39.7

AIR CONSUMPTION, CFM			AIR CONSUMPTION, M³/MIN			POWER OUTPUT (kW)
150 psi	250 psi	350 psi	10 bar	18 bar	24 bar	24 bar
283	519	703	8	14.7	19.9	31.1

RH560 COMPLETE HAMMER

32-5665-GQA-04C

WEIGHT		OUTSIDE DIAMETER		HAMMER LENGTH		HAMMER LENGTH WITH BIT			
						Bit closed		Bit extended	
kg	lb	mm	inch	mm	inch	mm	inch	mm	inch
117	258	150	5.9	1158	45.6	1266	49.8	1307	51.5

AIR CONSUMPTION, CFM			AIR CONSUMPTION, M³/MIN			POWER OUTPUT (kW)
150 psi	250 psi	350 psi	10 bar	18 bar	24 bar	24 bar
353	618	829	10	17.5	23.5	34.5

RH510 COMPLETE HAMMER

32-5165-GMA-04C

WEIGHT		OUTSIDE DIAMETER		HAMMER LENGTH		HAMMER LENGTH WITH BIT			
						Bit closed		Bit extended	
kg	lb	mm	inch	mm	inch	mm	inch	mm	inch
82	180	150	5.9	922	36.3	1008	39.7	1046	41.2

AIR CONSUMPTION, CFM			AIR CONSUMPTION, M³/MIN		
150 psi	250 psi	350 psi	10 bar	18 bar	24 bar
343	659	972	9.8	18.7	27.5

RH460 COMPLETE HAMMER

32-4665-GQA-04C

WEIGHT		OUTSIDE DIAMETER		HAMMER LENGTH		HAMMER LENGTH WITH BIT			
						Bit closed		Bit extended	
kg	lb	mm	inch	mm	inch	mm	inch	mm	inch
117	257	150	5.9	1155	45.5	1263	49.7	1304	51.3

AIR CONSUMPTION, CFM			AIR CONSUMPTION, M³/MIN			POWER OUTPUT (kW)
150 psi	250 psi	350 psi	10 bar	18 bar	24 bar	24 bar
300	632	879	8.5	17.9	25	42.4

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