

# Sandvik Breakers Large Range



# Broad Operating and Application Range

## Membrane type accumulator

The Sandvik Rammer Large Range of hydraulic hammers are the preferred choice among large breaker professional users across the world. And it's easy to see why.

## Simple valve system

## Efficient noise and vibration dampening system

### LARGE & POWERFUL

The largest models in the Sandvik Rammer hammer range, the flagship Large Range unites all the key features for which Sandvik Rammer hammers are renowned into one large, powerful, durable and reliable package. A pressure control valve ensures that every blow is delivered with maximum power while an optimized piston design transfers blow energy efficiently for optimum breaking performance.

## Heavy duty housing design

### DESIGNED TO BE A PROFESSIONAL UNIT

Manufactured with a heavy duty housing and a HARDOX lower boot for optimum wear resistance, Large Range hammers are designed to be easily maintained and reliable, regardless of application.

## Optimized piston design

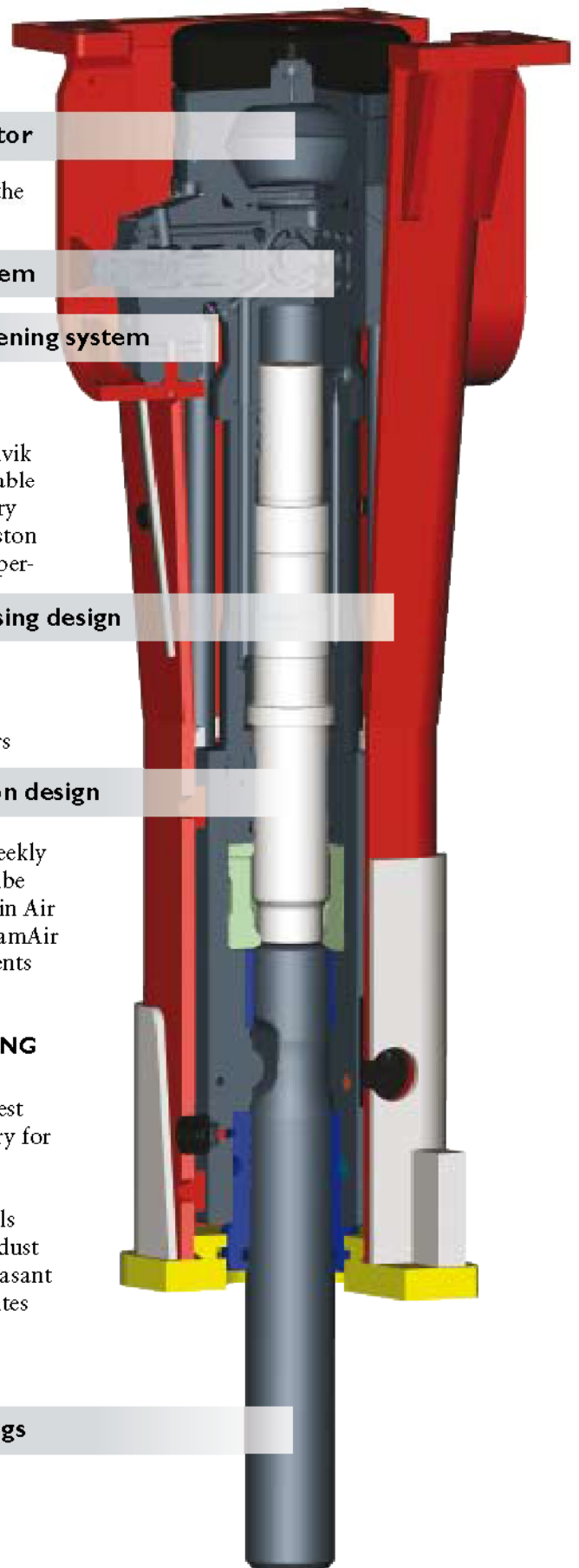
A membrane accumulator protects the carrier from hydraulic pulsation and eliminates the need for weekly maintenance. A built-in grease port and channel make Auto Lube installation easy and ensures efficient lubrication while a built-in Air port/channel enable easy underwater conversion or usage of RamAir either in tunnels or other dusty environments for longer wear item life time.

### CONSIDERATION FOR THE WORKING ENVIRONMENT

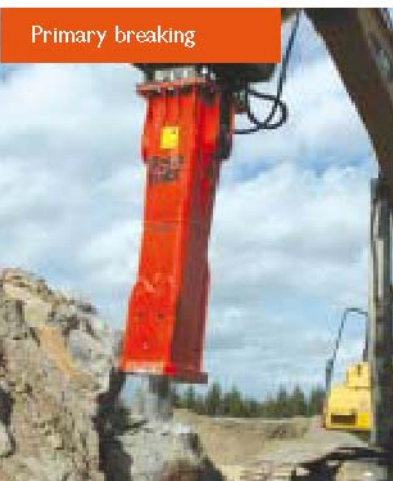
Sandvik Rammer Large Range have the best vibration dampening system in the industry for enhanced operator comfort.

Pro Control allows operator to choose optimum impact force for various materials to be broken. Sandvik Rammer Water Jet dust suppression and CITY silencing ensures pleasant working environment in challenging job sites like tunnels and urbanized town centers.

## Slip fit tool bushings



Primary breaking



Tunnelling



Secondary breaking



Trenching



Underwater breaking



Mining



Heavy duty demolition



Metallurgical applications



# The Best Just Got Better

**New strong housing, easily serviceable**

**New vibration dampening**

**Idle stroke selector**

**Autolube as standard increases bushing and tool life**

**Powercell uses state of art componetry, maximized reliability**

For more than a quarter of a century, Sandvik Rammer has maintained its position at the forefront of hydraulic hammer design via a process of constant product improvement based upon experience gained in millions of operating hours in diverse applications the world over.

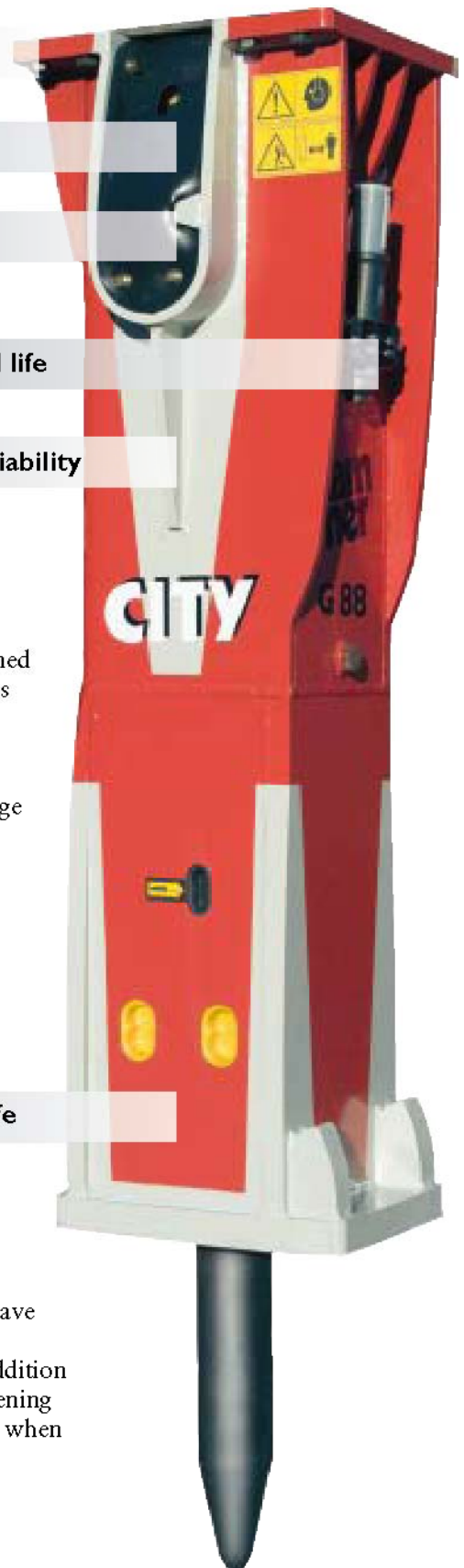
The latest model to emerge from this evolutionary process is the Sandvik Rammer BR 3088, a hammer that raises the standard in large hammer design and manufacturing techniques.

An enhanced housing has been designed to last longer but with reduced maintenance while a strong front head featuring fewer holes and massive bushings help extend tool and bushing life. Bushing and tool life receive a further boost with the addition of Ramlube II lubrication system as standard.

**Strong front head, less holes massive bushings, longer life**

Enhanced durability is also to the fore in the state-of-the-art power cell that comprises full-length piston guidance, new bolt technology and new seal package that deliver optimum blow force and shock wave with fewer components for maximum reliability.

Excavator operators will also be impressed by the BR3088. In addition to the reduction in maintenance duties, an excellent vibration dampening system helps protect the carrier and improve operator comfort, vital when working in a quarry or large-scale demolition application.



# Large Range, Providing Real Solutions for Real Productivity and Applications

## RamAir

- Eliminates dust and particles from entering the piston/tool striking area
- Forces grease forward when working horizontally or vertically
- Protects piston and tool ensuring longer service life in difficult conditions

## Ramona

- Monitors the hammer locally or remotely using modem technology
- Measures and records preset parameters
- Warns operator of malfunctions and improper use
- Accurately measures hammer operating hours and production rates

## Ramlube II

- Efficient greasing of tool and tool bushing
- Operator does not need to leave the cabin, contributing to site safety
- Extends service life of tool and tool bushing

## Pro Control

- Puts power control of hammer back in the operators hands
- Matches power to the job, reducing wear, tear and fuel consumption
- Easy touch screen for operator comfort

## Tunnelling Solutions

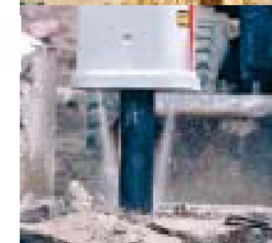
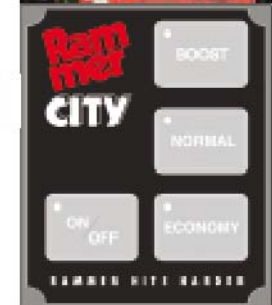
- Purpose-designed hammers to withstand the rigours of primary tunnelling duties
- Sealed housing, CITY, Jet and air ready as standard
- Enhanced vibration dampening system works in any position

## Jet

- Effective control of dust during hammer operation
- Efficient and economical use of water
- Increased visibility and safer working environment during hammer operation

## Application Specific Tools

- Tools designed to increase productivity
- Application-matched tool hardness and profiles
- Superior tool life in correct applications





BR 7013

	BR 3890 PRO		BR 4510 TUNNEL		BR 4511		BR 4511 PRO	
	BR 3088*)	BR 3890	BR 4510	BR 4510	BR 4511	BR 4511	BR 4511 PRO	BR 4511 PRO
Working weight Standard, kg	-	-	-	3800	-	-	-	-
Working weight CITY, kg	2370	3150	3150	3800	-	3800	-	7000
Working weight CITY-JET, kg	2370	3150	-	3800	-	3800	3800	7000
Working weight TUNNEL, kg	-	3125	-	-	3700	-	-	-
Impact rate, bpm	300-480	300-480	300-630	350-550	350-550	300-480	300-700	350-450
Operating pressure, bar	140-150	140-150	120-160	155-165	150-160	140-155	120-165	150-170
Pressure relief min, bar	210	210	210	210	210	210	210	220
Pressure relief max, bar	230	230	230	230	230	230	230	230
Oil flow range, l/min	160-230	210-310	210-310	220-350	220-350	220-320	220-350	300-400
Back pressure max, bar	8	8	8	10	10	8	8	10
Max input power, kW	58	78	83	96	93	83	96	113
Tool diameter, mm	142	160	160	170	170	175	175	203
Connections for hoses								
- pressure line (IN) (SAE 6000 psi)	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/2"
- return line (OUT) (SAE 6000 psi)	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	2
- grease connection (G) (BSPP internal)	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
- air connection (A) (BSPP internal)	3/8"	3/8"	3/8"	1/2"	1/2"	1/2"	1/2"	1/2"
- water jet connection, CITY-JET, TUNNEL (BSPP internal)	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
- remote control (Y)	1/2"	3/8"	3/8"	-	-	3/8"	3/8"	-
Line size minimum inner diameter								
- pressure line, mm	32	32	32	32	32	32	32	36
- return line, mm	32	36	36	36	36	36	36	42
Optimum oil temperature, °C	40-60	40-60	40-60	40-60	40-60	40-60	40-60	40-60
Max. allowed oil temperature range, °C	-20...+80	-20...+80	-20...+80	-20...+80	-20...+80	-20...+80	-20...+80	-20...+80
Carrier weight, ton	27-40	35-55	35-55	40-70	40-70	40-70	40-70	60-100
85 dB(A) noise level at distance of m								
Standard	N/A	-	-	-	-	-	-	-
CITY	17-25	18-24	-	18-24	-	18-24	-	20-32
CITY-JET	17-25	18-24	18-24	18-24	-	18-24	18-24	20-32
TUNNEL	-	18-24	-	-	18-24	-	-	-

\*) BR 3088 available with a Pro Kit.

