

# HEADSETS

### Premium Grinding Performance Delivering Optimal Efficiency

The Rocklabs expanded Headset range of premium grinding bowl sets provide exceptional results, leading the mineral sample preparation industry.

#### Unmatched Efficiency, Reliability, and Value

Rocklabs' expanded Headset range delivers industry-leading efficiency and reliability for mineral sample preparation. With a consistent high-quality formulation across all Headsets, transitioning to Rocklabs is seamless, providing superior durability and accurate sample analysis.

Our decades of design and manufacturing expertise ensures optimized grinding efficiency and support of precise analytical results. Rocklabs Headsets are designed to minimize sample loss with advanced sealing and ensure reliable operation and traceability. Appropriate seals are included with each Headset.

Benefit from our competitive pricing, regional stock, and efficient restocking, making Rocklabs the trusted partner for accurate, reliable sample preparation.

## rocklabs.com





#### **Material Options**

Headsets used for grinding mineral samples can introduce trace levels of contaminants into the material being analyzed. To address this, Rocklabs offers Headsets in five different materials, providing options to minimize contamination based on your analytical needs.

Our steel-based Headsets include a **Chrome Range** providing superior wear resistance, making them ideal for extended durability, while our **Carbon range** provides a lowchromium alternative and is specifically designed to minimize chromium contamination.

For applications where contamination from common steel elements, such as iron and chrome, is a hindrance, we provide other highperformance material alternatives including **Tungsten Carbide and Zirconia.** For ultra-pure applications requiring the lowest levels of contamination, our **Agate range** offers an ideal solution.







#### **Mill Compatibility**

Rocklabs Headsets are engineered to seamlessly fit a wide range of our pulverizing mills. When required, adaptor plates ensure compatibility. Additionally, these plates allow integration with many other OEM pulverizing mills using simple adaptor plates, providing versatility and reliable performance across different equipment brands.

#### Superior Design and Manufacturing

Since 1969, our technical team has focused on designing and manufacturing high-quality sample preparation equipment. With decades of expertise, we understand how to optimize sample grinding efficiency and accuracy to support your analytical needs. You can trust our Headsets and associated equipment to deliver reliable, representative sampling, ensuring accurate analytical results.



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#### **Efficient Purchasing and Re-Stocking**

We maintain regional stock of our most popular Headsets, ensuring availability when you need them. For larger orders, we offer direct shipping from our manufacturing base direct to your storage location. This enables rapid restocking and enables highly competitive logistic costs.

#### **Carbon Steel Headset Range**

		Recommended sample		
Model	Mill Compatibility*	maximum**	Components	Material
RL5000	Essa/FLS LM5, Alsto PV5	3500g	Bowl, Lid, Puck	Carbon Steel
RL2000	RM2000, Essa LM2 & LM201, Alsto PV2	1600g	Bowl, Lid, Puck	Carbon Steel
RL1000	RM2000, RM1000, Essa/FLS LM2 & LM201, Alsto PV2	800g	Bowl, Lid, Puck	Carbon Steel
RL800	RM2000, RM1000, Essa/FLS LM2 & LM201, Alsto PV2	640g	Bowl, Lid, Puck	Carbon Steel
RL300	RM2000, RM1000, Essa/FLS LM2 & LM201, Alsto PV2	240g	Bowl, Lid, Rings, Puck	Carbon Steel
RL100	Rocklabs Bench Top Ring Mill	80g	Bowl, Lid, Split Disc	Carbon Steel
RL40	Rocklabs Bench Top Ring Mill	35g	Bowl, Lid, Puck	Carbon Steel



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\*Each Headset is compatible with a wide range of pulverizers available. Depending on the combination of Pulverizer and Headset, adaptor plates may be required to ensure compatibility

\*\*The recommended maximum sample weight delivers the optimal grind in terms of balancing grind time and % pass efficiency. These recommended sample weights are based on basalt using an average density of 2.9 g/cm3

#### **Carbon Headset Specifications**

Model	Total Weight (kg)	Outside Diameter (mm)	Overall Height (mm)
RL5000	55	425	160
RL2000	26	278	120
RL1000	20	260	92
RL800	12	230	85
RL300	12	217	79
RL100	2.6	110	71
RL40	2.3	101	62



#### **Carbon Headset Elements**

Element	Au	Ag	Bi	Cd	Со	Cu	Cr	Mg	Mn	Мо	Ni	Pb	V	Zn
Max Levels	1.8	8	10	10	2000	5000	2000	2000	2%	1%	5000	2000	1%	450

Our Carbon Headsets are manufactured from steel with these maximum allowable elemental levels. However, the typical average values are significantly lower.

When conducting low level analysis, contamination tests should be carried out before use

All values are presented in ppm, except those noted as %



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#### **Chrome Steel Headset Range**

		Recommended sample		
Model	Mill Compatibility*	maximum**	Components	Material
R2000 Cr	Rocklabs RM2000, Essa/FLS LM2 & LM201, Alsto PV2	1600g	Bowl, Lid, Puck	Chrome Steel
R1000 Cr	Rocklabs RM2000 & RM1000, Essa/FLS LM1, LM2 & LM201, Alsto PV2	800g	Bowl, Lid, Split Disc	Chrome Steel
R800 Cr	Rocklabs RM2000, RM1000, Essa/ FLS LM1, LM2 & LM201, Alsto PV2	640g	Bowl, Lid, Disc	Chrome Steel
R600 Cr	RM2000, RM1000, Essa/FLS LM1, LM2 & LM201, Alsto PV2	480g	Bowl, Lid, Split Disc	Chrome Steel
R350 Cr	RM2000, RM1000, Essa LM1, LM2 & LM201, Alsto PV2	280g	Bowl Lid, Rings, Puck	Chrome Steel
R250 Cr	RM2000, RM1000, Essa/FLS LM1, LM2 & LM201, Alsto PV2	200g	Bowl Lid, Rings, Puck	Chrome Steel
R100 Cr	Rocklabs Bench Top Ring Mill	80g	Bowl, Lid, Split Disc	Chrome Steel
R40 Cr	Rocklabs Bench Top Ring Mill	35g	Bowl, Lid, Puck	Chrome Steel

\*Each Headset is compatible with a wide range of pulverizers available. Depending on the combination of Pulverizer and Headset, adaptor plates may be required to ensure compatibility

\*\*The recommended maximum sample weight delivers the optimal grind in terms of balancing grind time and % pass efficiency. These recommended sample weights are based on basalt using an average density of 2.9 g/cm3

#### **Chrome Headset Specifications**

Model	Total Weight (kg)	Outside Diameter (mm)	Overall Height (mm)
R2000 Cr	26	278	120
R1000 Cr	19	252	108
R800 Cr	17.6	252	108
R600 Cr	13.21	215	93
R350 Cr	14.18	215	93
R250 Cr	7	165	93
R100 Cr	2.67	110	71
R40 Cr	2.32	101	62



#### **Chrome Headset Elements**

Element	Au	Ag	Bi	Cd	Со	Cu	Cr	Mg	Mn	Мо	Ni	Pb	V	Zn
Max Levels	0.05	1	10	10	300	2400	14%	1000	7500	2500	4000	25	1400	500

Our Chrome Headsets are manufactured from steel with these maximum allowable elemental levels. However, the typical average values are significantly lower.

When conducting low level analysis, contamination tests should be carried out before use

All values are presented in ppm, except where noted as a %

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#### Tungsten Carbide, Zirconia, and Agate Headset Elements

		Recommended sample		
Model	Mill Compatibility*	maximum**	Components	Material
TC-200	Rocklabs RM2000 & RM1000, Essa/ FLS LM1, LM2 & LM201, Alsto PV2	160g	Bowl, Lid, Ring, Puck	Tungsten Carbide
TC-40	Rocklabs Bench Top Ring Mill	35g	Bowl, Lid, Puck	Tungsten Carbide
Zirc-200	Rocklabs RM2000 & RM1000, Essa/ FLS LM1, LM2 & LM201, Alsto PV2	160g	Bowl, Lid, Ring, Puck	Zirconia
Zirc-40	Rocklabs Bench Top Ring Mill	35g	Bowl, Lid, Puck	Zirconia
Agate-200	Rocklabs RM1000	160g	Bowl, Lid, Ring, Puck	Agate
Agate-50	Rocklabs RM1000	35g	Bowl, Lid, Puck	Agate



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\*Each Headset is compatible with a wide range of pulverizers available. Depending on the combination of Pulverizer and Headset, adaptor plates may be required to ensure compatibility

\*\*The recommended maximum sample weight delivers the optimal grind in terms of balancing grind time and % pass efficiency. These recommended sample weights are based on basalt using an average density of 2.9 g/cm3

#### **Headset Specifications**

Model	Total Weight (kg)	Outside Diameter (mm)	Overall Height (mm)
TC-200	5.22	161	92
TC-40	0.23	90	58
Zirc-200	1.1	173	70
Zirc-40	0.33	102	60
Agate-200	12.2	216	102
Agate-50	5.76	167	91







Our Tungsten Carbide, Zirconia, and Agate Headsets are manufactured from materials with these values representing typical average elemental levels.

When conducting low level analysis, contamination tests should be carried out before use

All values are presented in ppm, except where noted as %

#### **Composition of materials**

Element		Agate	Tungsten Carbide	ZIrconia
Ag	Silver	-	-	<0.2
Al	Aluminium	Trace	30	70
۹s	Arsenic	-	<10	<1
Au	Gold	-	-	0.04
В	Boron	-	<10	-
Ba	Barium	-	<10	160
Br	Bromine	-	-	1
C	Carbon	-	5.5%	-
c Ca	Calcium	-	50	150
	Chlorine	-	-	<10
Cl				3
Co	Cobalt	-	10%	
Cr	Chromium	-	50	<10
Cs	Caesium	-	-	<1
Cu	Copper	-	30	<10
Fe	Iron	Trace	100	70
Ga	Gallium	-	-	1
Hf	Hafnium	-	-	1.3%
In	Indium	-	-	0.01
К	Potassium	Trace	30	<20
La	Lanthanum	-	-	7
Mg	Magnesium	-	-	2%
Mn	Manganese	Trace	50	3
Mo	Molybdenum	-	50	<10
		-		
N	Nitrogen		100	40
Na	Sodium	Trace	30	
Nb	Niobium	-	100	<10
Ni	Nickel	-	50	-
Р	Phosphorus	-	30	-
Pb	Lead	-	30	<10
Rb	Rubidium	-	-	<10
Re	Rhenium	-	-	<0.05
S	Sulphur	-	50	-
Sb	Antimony	-	10	3
Sc	Scandium	-	-	1
Se	Selenium	-	-	<10
Si	Silicon	-	50	220
Sn	Tin	-	-	1000
				<1
Sr To	Strontium	-	30	
Ta Th	Tantalum	-	-	4
Th <del></del> :	Thorium	-	30	450
Ti	Titanium	-	-	0.6
U	Uranium	-	30	0.1
V	Vanadium	-	85.0%	<2
W	Tungsten	-	30	<10
Zn	Zinc	-	<10	70%
Zr	Zirconium	-	<10	70.30%
Rare Eart	hs			
Ce	Cerium	<10	-	-
Eu	Europium	0.5	-	-
Gd	Gadolinium	<0.5	-	-
Lu	Lutetium	0.3	-	-
Nd	Neodymium	<1	-	-
			-	_
Cm .	Samarium	<0.1	-	-
Sm Tb	Terbium	<0.3	-	-

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## Accurate results, better decisions.

Your success is based on the decisions you make, and those decisions are based on the results you get. We take our role seriously, in getting you accurate results and consistent representative sampling everytime.

Our sample preparation equipment is renowned for its high performance and reliability. In addition, Rocklabs provides exceptionally accurate certified reference materials to help you verify your analytical processes and ensure consistent, reliable results.

# **Third Party Accredited**

Rocklabs products are manufactured under management systems to the following standards:

- ISO 9001:2015 Quality Management System
- ISO 14001:2015 Environmental Management System
- ISO 17034:2016 Accredited Reference Materials Producer
- ISO 45001:2018 Occupational Health & Safety Management System





# Maximise your mine's potential with Rocklabs

Every piece of Rocklabs equipment is made to the highest specifications by industry experts. We design our crushers, splitters, pulverizers, dividers and more to reliably produce accurate results, improve site safety, and make your mining decisions clearer.

# Explore the full range of Rocklabs sample preparation equipment at rocklabs.com



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