

EasyMining™ RCR6 Rock Crusher
with ExDustVac™ Dust Vacuum System

User Manual

Rev. 1.4



Please read and understand all instructions before use. Retain this manual for future reference.

Download the latest revision of this manual at www.easymining.ca

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Thank you for using EasyMiningTM RCR6 rock crusher with ExDustVacTM dust vacuum system!

Based on EasyMiningTM RCH10, company's first generation rock crushers, EasyMiningTM RCR6 was designed keeping in mind portability and reliability. Our goal was to design a light weight rock crusher that is maintenance free throughout the entire mining season. At only 16Kg (35.5lb) dry weight, EasyMiningTM RCR6 is a grab and go rock crusher: you can backpack it or fly it most anywhere. Low fuel consumption engine mean less gasoline to haul as well. Noise and dust are the two environmental hazards that plague any dry process. Although we couldn't do much about noise without installing a high performance muffler that adds to weight and size, we greatly reduced the dust exposure by offering as standard equipment our own design dust removal system. ExDustVacTM (**Exhaust Dust Vacuum**) absorb the dust created in the crushing chamber and move it away from operator and machine through the attached metal hose that act like an engine exhaust as well, reducing operator's exposure to silica dust and other hazardous materials, with the added benefit of protecting the equipment by avoiding engine ingestion of the highly abrasive dust particles. It is worth mentioning ExDustVacTM only weight 310g, or about 11oz, and it is much lighter than the stock exhaust that it replace. The classifier screen is an integral part of the crusher body, no money have to be spent on replacement parts. For increased scratch and wear resistance, the rock crusher body, base plate and ExDustVacTM system are thermally and chemically treated. The “classic” chains found in all rock crusher available to recreational and small scale miners were replaced with fix hammers. Hammers impact edges are overlaid with a Swedish brand, premium hard-facing alloy, that improve the abrasion and impact resistance, saving you money in the long run on replacement parts. Another direct benefit of using overlaid hammers is the absence of steel shavings found in material crushed using chains rock crushers. EasyMiningTM RCR6 Rock Crusher is an innovating product we hope will serve your needs for many years to come.

| Specifications | EasyMining™ RCR6 | Competition |
|--|--|--|
| Made in Canada | Yes | No |
| Portable | Yes, approximately 17Kg ready condition | Weight not listed |
| Dust removal | Standard equipment. Maintenance free ExDustVac™ | Aftermarket, requires 110V, USD \$229 plus shipping |
| Maintenance free rotating hammer design | Yes | No. Chains design. Requires occasional chains replacement, USD \$50 plus \$25 shipping |
| Hard-facing overlay hammers impact edges | Yes | Not applicable |
| Maintenance free screen | Integral part of the chamber | Requires occasional replacement, USD \$25 plus \$15 shipping |
| Thermal and chemical treatment for improved resistance to the elements | Yes | No. Parts are painted |
| Metal shaving found in the crushed material | Not observed | Yes. Hard to remove from the crushed material |
| Small print | Yes, 13”x13”x13” | |
| Low fuel consumption | Yes, 79cc engine | |
| Engine included | Yes | Optional, prices USD \$200 to \$450 |
| Renting offered by the manufacturer (try before you buy) | Yes. Rent deducted from the selling price | No |
| Warranty | 6 mo parts and labour | 90 days engine, 6 mo bearings, 2 yrs chamber |
| Phone product support | Yes | No |
| Claimed capacity (material processed per hour) | Not offered, too many variables for an accurate estimate | 500 to 800lb per hour |

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For service and technical support call 604 728 0663 or email service@easymining.ca

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What's included

1. Rock crusher assembly including 79cc motor, 6” rock crusher, and ExDustVac™ dust vacuum system
2. Exhaust flexible metal tube, aprox. 4'-6” long
3. Engine manual
4. Engine spark plug key and rod
5. Engine oil funnel
6. Rock crusher manual

1 RCR6 ROCK CRUSHER SPECIFICATIONS

RCR6 - ROCK CRUSHER

- designed and manufactured in Canada
- innovative ExDustVac™ dust removal system
- all metal construction
- all parts plasma or laser cut for consistent quality
- thermal and chemical treated parts for increased scratch and wear resistance
- TIG welding process all parts
- impact and abrasive resistant premium hardfacing overlay on hammer impact edges applied by MIG process
- process up to 1” size ore
- used for sampling or light production
- dry weight without accessories 16.1Kg (35.4lb)
- highly portable
- low consumption engine
- no external rotating elements
- maintenance free design
- table top design
- chamber 6” diameter
- chamber length 3”
- screen 1/8” holes
- hopper accept 1” size material

79cc ENGINE

- 79cc gasoline 4 stroke engine
- auto shut-off low oil
- 3.600rpm maximum
- 4.5ft-lb torque
- 26.9lb weight

2 ROCK CRUSHER PERFORMANCES

- designed for testing and small production
- material processing capacity to be determined
- used as a secondary crusher
- chamber diameter 6”
- chamber length 3”
- 4 edge rotating hammer
- screen 1/8” holes
- size material processed up to 1”, 1/2” recommended
- used for ore, rocks, clay
- used in hard rock mining and placers operations

3 OPERATION

For engine operation, please read the engine manual included in the package

⚠ NEVER RUN THE ROCK CRUSHER WITHOUT THE HOSE BETWEEN CHAMBER AND ExDustVac™ ATTACHED. FAILURE TO DO SO WILL VOID THE WARRANTY

CRUSHER OPERATION

⚠ ALWAYS USE SAFETY EQUIPMENT WHEN OPERATING THIS EQUIPMENT. FAILURE TO DO SO WILL RESULT IN ACCIDENTS OR DEATH

⚠ NEVER ALLOW CHILDREN TO OPERATE OR BE IN THE VICINITY OF THE ROCK CRUSHER DURING OPERATION

⚠ DO NOT INSERT METAL PARTS INSIDE ROCK CRUSHER: CATASTROPHIC FAILURE OF THE ENGINE AND CRUSHER WILL OCCUR, RESULTING IN PROPERTY LOSS, ACCIDENTS OR DEATH

⚠ DURING OPERATION, USE THE FOLLOWING SAFETY EQUIPMENT: WORK GLOVES, SAFETY GLASSES, FACE SHIELD, APRON, MUFFLERS

⚠ ExDustVac™ SYSTEM AND EXHAUST TUBE BECOME EXTREMELY HOT DURING OPERATION, DO NOT TOUCH WITH ANY BODY PARTS OR FLAMMABLE MATERIALS

⚠ ALWAYS TURN OFF ENGINE IF YOU INTEND TO CLEAR A BLOCKAGE. DO NOT INSERT STICKS, RODS, YOUR OWN BODY PARTS INSIDE CHUTE TRYING TO CLEAR BLOCKAGE WHEN ENGINE IS RUNNING

BEFORE STARTING

⚠ NEVER RUN THE ROCK CRUSHER WITH THE FRONT COVER OR WIND CAP REMOVED, FAILURE TO DO SO WILL RESULT IN ACCIDENTS OR DEATH

⚠ NEVER ROTATE BY HAND THE MOTOR'S SHAFT DURING MAINTENANCE, UNEXPECTED START OF THE ENGINE MAY OCCUR RESULTING IN PROPERTY DAMAGE, ACCIDENTS OR DEATH

- check rock crusher for any defects, missing or loose parts
- rock crusher covers must be securely placed
- check rock crusher chamber is empty
- check engine as per engine manual
- attach flexible metal tube to ExDustVac™ and secure it with the ring provided, using a flat screwdriver

⚠ NEVER RUN THE ROCK CRUSHER WITHOUT THE HOSE BETWEEN CHAMBER AND ExDustVac™ ATTACHED. FAILURE TO DO SO WILL VOID THE WARRANTY

START-UP PROCEDURE

- For engine start-up procedure, see engine manual included in your package

RUNNING

⚠ ALWAYS USE PROPER SAFETY EQUIPMENT

⚠ NEVER OPERATE THIS EQUIPMENT WITH ANY COVERS REMOVED

⚠ DO NOT MODIFY THIS EQUIPMENT

⚠ ALWAYS RUN THE ENGINE WITH THROTTLE AT FULL SPEED DURING CRUSHING OPERATION

☞ DO NOT ATTEMPT TO FILL THE CRUSHER CHAMBER WITH ORE AND START THE ENGINE

☞ DO NOT ALLOW THE ENGINE EXHAUST TO TOUCH ANY FLAMMABLE MATERIALS OR COME IN CONTACT WITH YOUR BODY

☞ DO NOT ALLOW CHILDREN OR UNTRAINED PERSONAL TO OPERATE THIS EQUIPMENT

☞ DO NOT BREATH ENGINE EXHAUST AND DUST CREATED DURING CRUSHING OPERATION

☞ DO NOT OPERATE INDOOR

- allow engine to run at idle speed for a few minutes. During cold weather, a longer time to reach nominal operating temperature may be required
- apply full power
- lift hopper cover, drop in ore, and replace cover. Do not choke the crusher. Crushing operation takes seconds to complete
- to avoid accidents, do not operate with the wind cover in the open position
- to prolong engine life and lower gasoline consumption, do not maintain full power if you don't feed the crusher
- for first few runs, it is normal for a new rock crusher to release some smoke. It is the protective oil that burns or evaporate

STOPPING

- reduce engine to idle and run for a couple of minutes to allow ExDustVac™ system to cool
- stop engine as per engine manual
- allow exhaust flexible metal tube to cool before removing

STORAGE

- for engine storage recommendations, follow the instructions found in the engine manual

- rock dust absorbs moisture that could lead to rust. We recommend you clean the inside of chamber very well before storage. Never use compressed air to blow up the dust, use a small brush instead. Do not breath the dust created, do this operation outside. You can give a very light coat of oil on all parts inside the chamber
- clean the dust accumulated inside the exhaust flexible metal tube before storage as well, a light coat of oil will help preserve it free of rust
- store in a dry, well ventilated area

4 TROUBLESHOOTING

For engine troubleshooting, please consult the engine manual found in your package.

Engine won't start:

- See engine manufacturer manual

Engine doesn't maintain constant speed when not under load:

- Carburettor dirty: clean carburettor
- If you can't clean carburettor right away, apply choke until engine stop "hunting", most likely mixture is too lean. Clean carburettor at first opportunity

Engine stopped for no apparent reasons:

- See engine manufacturer manual
- Check crusher hammer is not blocked by rocks, remove blockage (see below)

To remove crusher blockage:

- Turn engine electrical contact to OFF position
- Remove the 4 wing nuts including washer and spring washer, put them in a safe place
- Remove the front cover
- Remove the excess rocks, do not breath the dust

 AVOID ROTATING THE HAMMER, SUDDEN START OF THE ENGINE IS POSSIBLE AND PROBABLE

- Clean old sealant from the crusher lip and front cover
- Apply fresh sealant on the crusher lip (you can use any sealer, do not use adhesives)
- Replace front cover
- Replace washers, spring washer and wing nut. Tighten the four wing nuts

5 MAINTENANCE

Front cover removal:

- Turn engine electrical contact to OFF position
- Remove the 4 wing nuts including washer and spring washer, put them in a safe place
- Remove front cover, it may be slightly stuck to the crusher body by the dust sealant
- Clean old sealant from the crusher lip and front cover

 AVOID ROTATING THE HAMMER, SUDDEN START OF THE ENGINE IS POSSIBLE AND PROBABLE

Rock crusher chamber removal from the engine:

- Loose the two rings holding the rubber hose attached between rock crusher chamber and ExDustVac™ System
- Remove the hose and rings
- Remove 5/32-24 screw that holds the hammer to the shaft
- Loosen two setscrews located on the hammer hub 90° apart, use a 1/8” hex. Do not damage the setscrews, it will become impossible to remove the hammer from the shaft
- Remove hammer, 3/16 shaft key, and rubber protective sleeve
- Remove the 8mm screws (4 pieces), located on the back plate
- Slide rock crusher off engine shaft, avoid scratching the shaft
- Do not use compressed air to blow up the dust, use a brush instead. Do not breath the dust

Front cover replacement:

- Apply fresh sealant on the crusher lip (you can use any sealer, do not use adhesives)
- Replace front cover
- Replace washers, spring washer and wing nut. Tighten the four wing nuts

We update this manual on a regular basis, you can download a new copy from our website www.easymining.ca

NOTES