

### A Revolution in Rock Excavation



The Xcentric® Ripper is an excavator attachment developed with the latest advances in excavation and demolition systems in mind.

It meets the highest standards. It was patented by Grado Cero Sistemas, a trailblazer in the industry. Trough it's design, an outstanding performance can be achieved, allowing more efficient work.

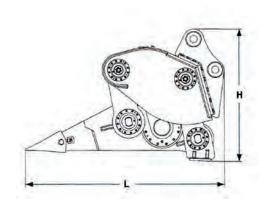
Made completely of wear-resistant steel, this attachment device is almost maintenance free, less noisy than any other excavation tool, can be used under water without any damage risk and be adapted to countless work sites. Thanks to it's uncomplicated mechanical design, which has no pricey components, the maintenance cost are very low and down times are ignorable.

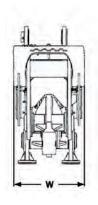


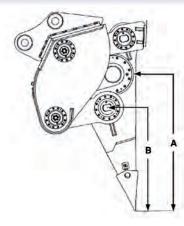
# Standard specifications

Item	Model	XR 10	XR 15	XR 20	XR 30	XR 40
Hydraulic excavator	tons	7 - 10	11 - 16	18 - 24	24 - 30	32 - 40
Mass of ripper (incl. top bracket)	kg	930	1700	2500	3300	4200
Mass of ripper (less top bracket)	kg	829	1550	2200	2800	3600
Hydraulic working pressure	MPa	15 - 18	16 - 19	18 - 20	22 - 24	22 - 24
Hydraulic return pressure	MPa	0.6	0.6	0.6	0.6	0.6
Hydraulic oil flow	L/min	60	120	160	180	200
Case drain maximum pressure	MPa	0.4	0.4	0.4	0.4	0.4
Frequency	1/min	1500	1400	1400	1300	1200
Dimensions L x W x H	cm	168x45x90	220x66x130	240x78x175	280x85x175	310x90x184
Dimension A	cm	102	140	165	179.1	200
Dimension B	cm	76	105	130	139.1	155
Accumulator pressure	MPa	0.6	0.5	0.5	0.5	0.5

Item	Model	XR 50	XR 60	XR 80	XR 120-3M	XR 120-4M
Hydraulic excavator	tons	42 - 55	55 - 70	70 - 100	100 - 150	100 - 150
Mass of ripper (incl. top bracket)	kg	5600	7000	10500	13000	13000
Mass of ripper (less top bracket)	kg	5000	5700	8700	11000	11000
Hydraulic working pressure	MPa	26 - 28	26 - 28	30 - 32	30 - 32	22 - 24
Hydraulic return pressure	MPa	0.6	0.6	0.6	0.6	0.6
Hydraulic oil flow	L/min	250	280	380	500	600
Case drain maximum pressure	MPa	0.4	0.4	0.4	0.4	0.4
Frequency	1/min	1000	1000	1000	1000	1000
Dimensions L x W x H	cm	320x90x190	345x110x217	380x132x230	400x132x282	400x132x282
Dimension A	cm	210	226	240	243	243
Dimension B	cm	165	176	180	180	180
Accumulator pressure	MPa	0.4	0.25	0.6	0.6	0.6







# A full range for hydraulic excavators from 8 tons up to 150 tons



- The **XR10** is suitable for demolition works, where noise is an issue. Also for excavation, trenching or recycling plants it can be a perfect solution.
- The **XR15** is perfect in excavation and demolition in urban areas. Also for trenching, recycling plants, works underwater or in mud.
- The **XR20** turns your medium size excavator into a high performace machine. You will use it in excavation and demolition. Also for trenching, recycling and working in permafrost is applicable with very high performance.
- The **XR30** is indispensable for excavation and demolition, low noise and high performance makes it a leader. The perfect tool for all types of applications.
- The **XR40** becomes the protagonist of the work site. In quarrying work excellent results are achieved with production volumes up to **120 m3** per hour. In trenching is unrivaled.
- The XR50 is specially designed for high-volume production in quarries and infrastructure works. Production volumes are reached over 150 m3 per hour in limestone and other types of fractured rock. Also for trenching and recycling.
- The **XR60** is designed for high-volume production in quarries and infrastructure works (> **175 m3/hr**). Normally applied in areas, where drilling and blasting with explosives is not permitted for safety or environmental reasons. Also suitable for demolition, mining, etc.
- The XR80 meets or exceeds conventional equipment for high production in quarries and infrastructure projects, where drilling and blasting are no longer allowed or are simply more expensive. It can achieve production volumes of more than 200 m3 per hour in fractured rock types. Very suitable for marine excavation in large dredging projects.
- The **XR120** is our biggest Series Production model. It is currently the largest serial attachment manufactured worldwide for quarrying. Production volumes up to **250 m3** per hour can be achieved. Ideal for mining, which brings great value and versatility to large tonnage excavators. Very appropriate for extracting marine works in dredging projects with adverse conditions.

We are Xcentric. Better. Faster. Stronger.



www.xcentricripper.com



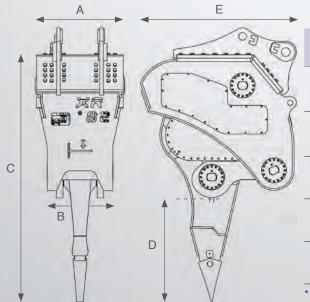
# Xcentric Ripper "Mining Series"

**Xcentric Ripper** has developed a new series of high performance machines. Denominated as "**Mining Series**", they are focused to be used in mining, where the highest production values are required, as well as continuous work shifts, where the reliability and comfort of working with the excavator are of vital importance.

The working technology is basically the same as in the standard version, but not the mechanics, which has been reinforced to achieve a greater impact at a lower frequency.

We guarantee that its use will not leave you indifferent, as well as 2 years warranty.

TECHNICAL SPECIFICAT	IONS	XR22	XR32	XR42	XR52	XR62	XR82	XR122
Excavator weight	Tons	18 - 23	24 - 32	32 - 40	40 - 55	55 - 70	70 - 90	100 - 140
Ripper operating weight (incl. top bracket)	kg	2.935	3.710	4.640	5.305	7.600	10.730	15.950
Ripper operating weight (top bracket not included)	kg	2.560	3.300	4.120	4.590	6.330	9.300	14.000
Hydraulic working pressure	MPa	16	24	24	28	28	30	30
Hydraulic oil flow	L/min	160	190	210	270	280	420	500
Frecuency	1/min	900	1.100	1.100	1.100	1.100	700	600



	XR22	XR32	XR42	XR52	XR62	XR82	XR122
A	830	775	860	960	1.100	1.270	1.270
В	780	635	630	630	1.100	960	1.080
С	2.243	2.715	2.865	3.000	3.450	3.575	4.150
D	1.000	1.160	1.215	1.315	1.380	1.530	1.780
Е	1.600	1.660	1.715	1.830	2.170	2.300	2.600

<sup>\*</sup> Dimensions in millimeters.

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## **Xcentric® Ripper Benefits**

- ✓ 3 to 5 times higher production
- Minimum noise levels
- ✓ Minimum maintenance
- ✓ No daily lubrication required
- Minimum wear parts consumption
- ✓ Long life components and materials
- ✓ Less fuel consumption per produced m3/ton

- ✓ Less emission per produced m3/ton
- **✓** Environmental protection (Bio Lubricants)
- Economical alternative for "Drilling and Blasting"
- ✓ Marine/underwater operation
- Easy operation
- ✓ Increased operators comfort

#### How it started...

Grado Cero Group has manufacturing plants for the production of heavy duty excavator buckets and patented Go Max quick couplers. At the same time one of their divisions are performing large rock excavation and trenching projects in the North of Spain. Thanks to this unique combination, they were able to invent and develop a completely new attachment to excecute these difficult projects much faster and much more efficient. In the beginning of 2009 the first prototypes started to work for the first practical tests in all kind of different rock conditions. Non stop and intense working from that moment on, in all types of rock, has resulted in a 100% reliable, efficient and maintenancefree attachment: the Xcentric® Ripper.

Economical and financial demands in the market are always pushing for increased performance and production output in rock excavation and demoltion. At the same time clients are asking for lower

maintenance costs, less down time and better warranty conditions. In 2009 Grado Cero has developed a revolutionary attachment: the Xcentric® Ripper to do excavation and demolition in less time, for lower cost and with a minimum of noise. The Xcentric® Ripper is developed with a patented "Impact Energy Accumulation Technology", which makes

it in 80% of the job applications more productive than any Hydraulic Breaker available on the market.



In even 70% of the job applications a 2 to 5 times higher production can be achieved. The Xcentric® Ripper's closed energy chamber cannot be influenced or damaged from the outside by dust, water, dirt or what so ever. This means that it can work without any problem in the most severe conditions in tunnels, foundations, muddy and wet places.

Even all kinds of work underwater in for example harbours, canals

Even all kinds of work underwater in for example harbours, canals and open sea can be done without making any special expensive and complicated preparations. This is where and why the Xcentric® Ripper saves so drastically the high expensive maintenance and repair cost, that normally appear in such working circumstances.

