



**McQuaid**  
Engineering Ltd

# ROCK BREAKER BOOMS



## COMPANY OVERVIEW

**McQuaid Engineering Ltd has been manufacturing** world class products for the quarrying and mining sector for over 25 years. Driven by the challenges our customer's face we have built our reputation on offering strong, durable and safe products designed and manufactured to work reliably in the toughest of environments. The ethos of our business is based on maintaining an innovate workplace which maintains an unparalleled level of expertise and consistency across our products, while maintaining close and long term relationships with our customers.



## STATE OF THE ART FACILITIES

**We operate a full manufacturing facility** which boasts state of the art modern engineering processes and has strict quality management systems in place. From the initial design stage; through to cutting steel, welding, precision machining, assembly, build and testing, everything is carried out from a controlled environment within our factory. This means we not only get the benefit of more efficient manufacturing processes, but we also ensure greater quality control helping to deliver a quality product. Innovation combined with years of industry experience has enabled us to engineer products that utilize the most advanced technologies available, yet are incredibly user friendly.



## GLOBAL NETWORK

**Today McQuaid Engineering Ltd. is represented** in 5 continents with a global dealer network. Our customers know they can rely on us to help improve their operational efficiency, reduce risks and increase profitability. It is our commitment to quality, safety standards and customer satisfaction that has positioned us a world leader in rock breaker boom design, and attachments for the construction, aggregate, demolition and mining industries.



## QUALITY ASSURED

**The McQuaid name is recognised as a symbol** of quality products worldwide. Our commitment to outstanding business and manufacturing performance, productivity and customer satisfaction is evidenced through our success in achieving not one but two ISO standards – ISO Certifications ISO 9001:2015 and ISO 3834-3:2015. It is our continual improvement and investment in manufacturing processes and equipment which means McQuaid Engineering is able to meet the challenges of worldwide industry.





# ROCK BREAKER BOOM SYSTEMS



# SELECTING A ROCK BREAKER BOOM SYSTEM

A boom system when specified correctly is a valued component within an aggregate production plant. The boom system will increase production, reduce down time and increase safety.

The core factors that determines a functional boom system are; the type of crushing plant, the tonnage capacity of the plant and the size and hardness of materials being processed.

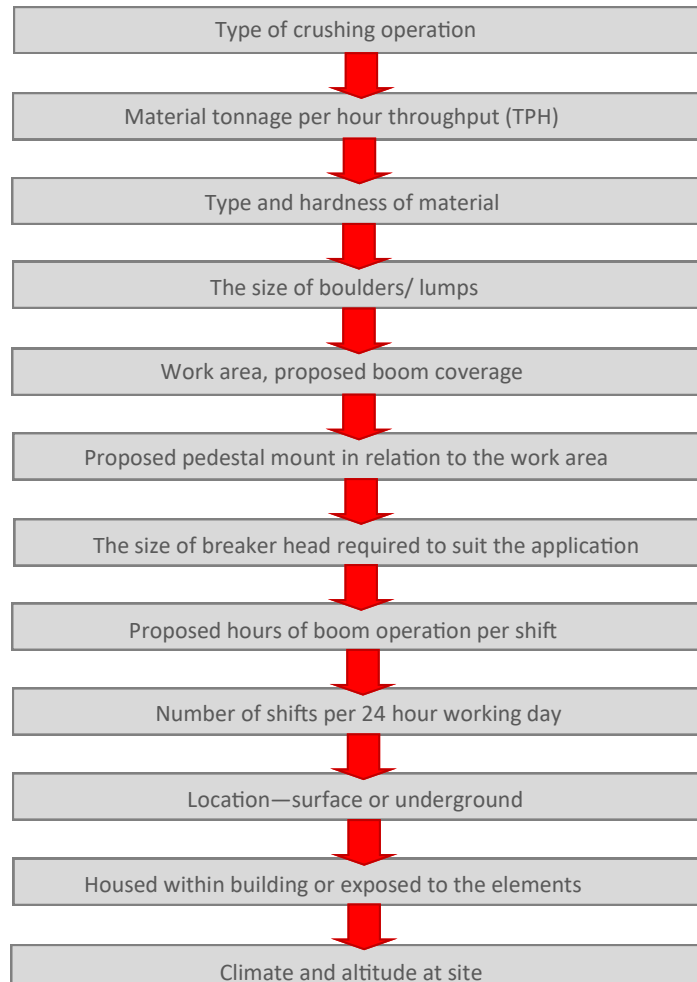
## KEY COMPONENTS OF A BOOM SYSTEM

- Pedestal boom
- Hydraulic breaker head
- Hydraulic power pack unit
- Operating controls
- Support structure



## SELECTING EQUIPMENT

To fully understand requirements for the supply of a rock breaker boom system the following technical parameters need taken into consideration:



# ROCK BREAKER BOOM SYSTEM BY APPLICATION

Our experienced engineering team are on hand to advise and offer technical support to assist in selecting our boom system to best meet the technical requirements at site.

They will endeavour to understand production requirements, specifying equipment that will increase material production and personnel safety at site.

## SYSTEM APPLICATION OVERVIEW



Mobile  
Crushers



Jaw  
Crushers






























Grizzly



Gyratory  
Crushers



MODEL	APPLICATION	NOMINAL MAX HORIZONTAL REACH (M)	MAX HORIZONTAL REACH (M)	MAX VERTICAL REACH (M)
RB20		2	3.2	2.0
RB30		2.8	4.2	2.9
RB40	 	3	4.6	2.5
RB42	  	4.1	6	4.2
RB42S	  	3.8	7.8	4.2
RB42X	 	5.7	7.1	5.6
RB42SX	 	5.4	7.3	5.9
RB52S	 	5.4	7.8	5.2
RB52HD	 	5.9	7.8	4.9
RB60	 	6.4	8.7	6.3
RB75	 	7.6	9	6.8
RB90	 	8.8	10.8	7.7
RB110	 	10	12.6	9
RB120S	 	12.5	15	9.2



# MOBILE BOOM SYSTEMS

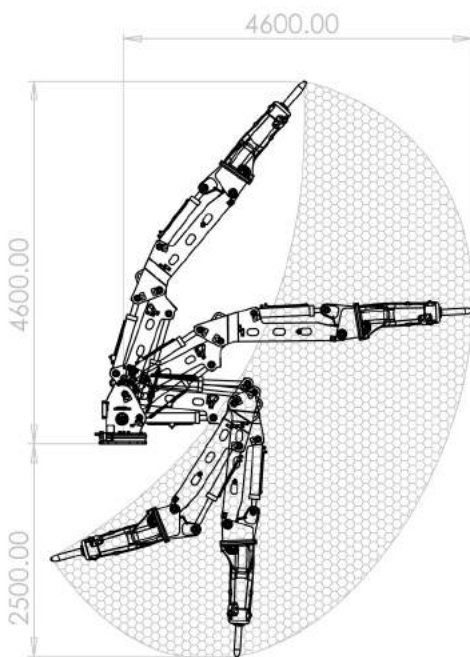


# MOBILE BOOM SYSTEMS

McQuaid compact booms are typically used on portable crushing plants and are fitted directly to the structure of the mobile crusher. These multi-purpose boom systems have been shown to increase productivity by up to 30% by removing bridged rock and breaking oversize in the hopper without the need to stop a plant or reposition equipment. Featuring a low-profile design and low transportation height these heavy duty, low profile rock breakers are stable and easy to install as they travel within transport dimensions.



## RANGE OF MOTION



### FEATURES:

- Compact design to integrate onto the mobile crusher
- Parks within the transport dimensions
- Built to exact tolerances from premium materials
- Turntable mounted base
- Heat treated conical pins
- Low height/ width design
- Optimal space usage
- Stable and easy to install

### BENEFITS:

- Reduce down time and increase productivity
- Enhance safety
- Eliminate bridging and maintain an uninterrupted flow of material through the crusher
- Compact and multi-purpose
- Can be easily transported yet is still large enough to handle the raking and breaking
- Hand held remote control allows the operator flexibility to operate the boom from a safe distance and viewpoint
- Maximum productivity with maximum cost efficiency

## SPECIFICATIONS

MODEL	NOMINAL HORIZONTAL REACH (M)	HORIZONTAL REACH (M)	VERTICAL REACH	BOOM WEIGHT	ROTATION
RB20	2.0	3.2	2.0	890	320°
RB30	2.8	4.2	2.9	1040	320°
RB40	3.0	4.6	2.5	1100	320°
RB42S	3.8	7.8	4.2	2100	320°



# MID RANGE BOOM SYSTEMS





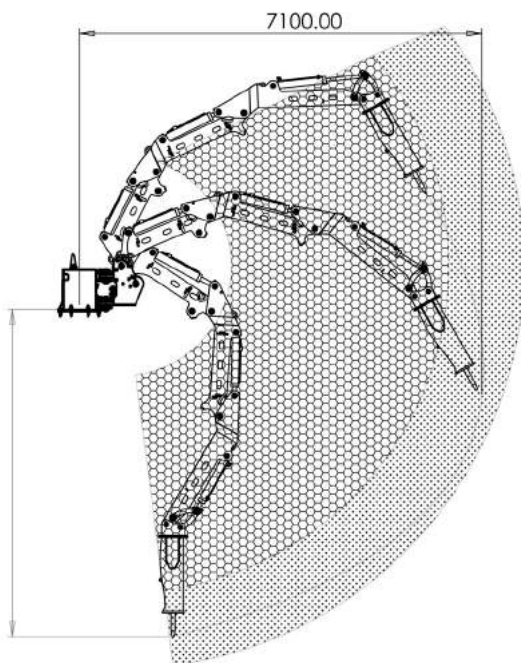
# MID RANGE BOOM SYSTEMS

Our medium duty range of booms are typically mounted over the mouth of a primary crusher. The boom system enables the breaker to reach into the mouth of the crusher, reducing oversized boulders as well as clearing any blockages in the hopper.

The design of the McQuaid mid range booms optimally combines light weight with high capacity. The larger footprint of the boom pedestal effectively optimises the stress distribution and foundation structures.



## RANGE OF MOTION



### FEATURES:

- Optimally combines light weight and a high capacity
- User friendly remote controls allow for smooth and agile operation
- Shock absorbing pedestal mounting
- Heat treated conical pins
- Breaker anti-lunge cushioning within the hydraulic system
- Unlimited visibility from the cabin or operator stand
- Simple assembly, safe, quick and easy operation

### BENEFITS:

- Long term plant production is vastly improved
- Bridging is eliminated, maintaining uninterrupted flow of material through the crusher
- Downtime due to build ups is considerably reduced, ensuring a steady flow of material
- Payback time on the investment is usually very short due to the vast economic benefit as a result of increased productivity
- The safest way to clear the crusher cavity

## SPECIFICATIONS

MODEL	NOMINAL HORIZONTAL REACH (M)	HORIZONTAL REACH (M)	VERTICAL REACH	BOOM WEIGHT	ROTATION
RB42S	3.8	5.7	4.2	2100	320°
RB42	4.1	6.0	4.2	2300	180°
RB42SX	5.4	7.3	5.9	2605	320°
RB42X	5.7	7.1	5.6	2770	180°

# HEAVY DUTY BOOM SYSTEMS





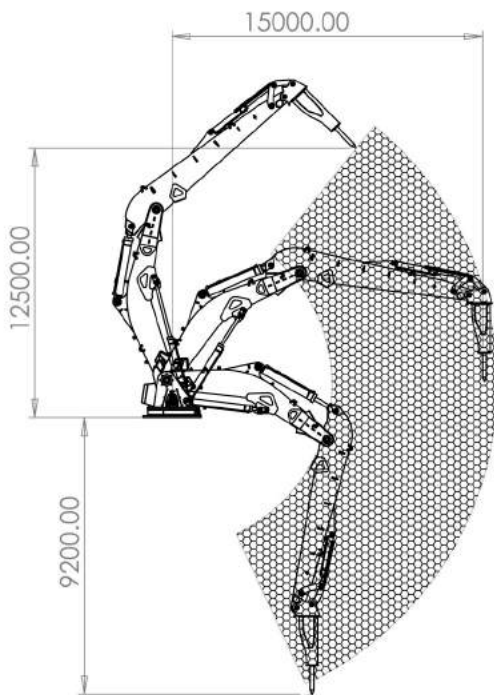
# HEAVY DUTY BOOM SYSTEMS

Our heavy duty range of booms are suitable for permanent rock breaking in arduous applications.

A rock breaker boom is the safest way to manage bridging, build ups and oversized materials. Our rock breaker boom systems enhance the safety, productivity and profitability of crushing applications in mines and quarries worldwide.



## RANGE OF MOTION



## SPECIFICATIONS

### FEATURES:

- Utilizes the maximum performance of the hydraulic hammer
- Sophisticated control system meets safety and reliability requirements and at the same time is user-friendly
- Made from high strength steel alloys, guaranteeing longevity and ensuring resistance to torsion and buckling
- Long lasting, heavy-duty hydraulic cylinders maximise productivity for longer periods
- Shock absorbing pedestal mounting increases stability

### BENEFITS:

- Keep your plant running at maximum productivity
- Quickly eliminate crusher blockages and provide smooth material flow
- Built to last for years in even the most arduous working environments
- Ensures high levels of safety of the operators work
- Vast economic impact as a result of improved productivity

MODEL	NOMINAL HORIZONTAL REACH (M)	HORIZONTAL REACH (M)	VERTICAL REACH	BOOM WEIGHT	ROTATION
RB52S	5.4	7.8	5.2	5500	320°
RB52HD	5.9	7.8	4.9	8000	180°
RB60	6.4	8.7	6.3	7250	180°
RB75	7.6	9	6.8	8500	180°
RB90	8.8	10.8	7.7	10500	180°
RB110	10	12.6	9	11500	170°
RB120S	12.5	15	9.2	23500	320°

## HEAVY DUTY BOOM SYSTEMS







# POWER PACK UNITS

We offer a range of Submersed, Non—Submersed and Load Sensing power pack units for the purpose of operating both the rock breaker boom and hydraulic breaker. A hydraulic power unit is supplied with all static pedestal boom systems. All of our power pack units are designed for maximum performance, reliability, simple and efficient maintenance.

Our power pack units are selected to suit the chosen breaker and to ensure maximum productivity and performance of the complete boom system package. As standard, all MQ boom systems destined for static applications are supplied with a high specification hydraulic power unit. The unit comprises a high efficiency electric motor, a large displacement hydraulic pump and a high capacity reservoir. An oil heater and oil cooler are also offered dependent on requirements.



Load Sensing Power Unit



Submersed Power Unit



Non— Submersed Power Unit

## SPECIFICATIONS

POWER PACK UNIT SPECIFICATIONS										
		PP22	PP30	PP37	PP45T	PP55T	PP75T	PP45LS	PP75LS	PP90LS
MOTOR	KW	22	30	37	45	55	75	45	75	90
	HP	30	40	50	60	74	100	60	100	100
MOTOR RUNNING SPEED	RPM	1450	1450	1450	1450	1450	1450	1450	1450	1450
PUMP TYPE		Single	Single	Tandem	Tandem	Tandem	Tandem	LS	LS	LS
PUMP	CC	48	62	75 + 48	75 + 48	96 + 48	122 + 48	100	140	140
PUMP FLOW RATE	LPM	60	84	105 + 42	100 + 42	120 + 42	170 + 60	145	205	205
	GPM (US)	16	22	27 + 11	26 + 11	32 + 11	45 + 16	38	53	53
PUMP WORKING PRESSURE	BAR	180	200	200	200	200	200	220	220	220
	PSI	2650	3000	3000	3000	3000	3000	3200	3200	3200
MAX OPERATING PRESSURE	BAR	210	220	220	220	220	220	310 -350	310-350	310—350
	PSI	3100	3200	3200	3200	3200	3200	4495 -5075	4495- 5075	4495- 5075
HYDRAULIC RESERVOIR CAPACITY	LITRES	150	200	350	500	500	500	500	500	500
	GAL (US)	40	53	92	132	132	132	132	132	132



# ACCESSORIES

## GREASING SYSTEMS



For heavy duty booms working continuously we would recommend the Auto Lubrication System LINCOLN P502.

## REMOTE CONTROL



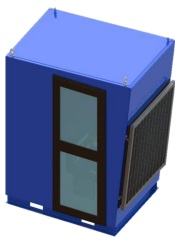
The boom can be remotely controlled using a hand held remote control unit. This allows the operator more flexibility to operate the boom from a safe distance.

## QUICK HITCH



Our quick couplers and hitches will improve the productivity, flexibility and potential of your machine for even the most demanding jobs.

## OPERATORS CABIN



We can provide a single or double operators cabin. Cabins can come complete with air conditioning, heating and electric panel.

## OPERATORS SEAT



The ergonomic seat is designed for operators comfort an can be placed in an existing control room or cabin.

## MANUAL CONTROLS



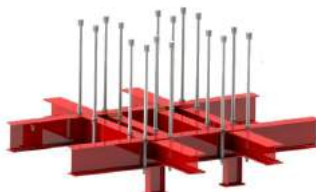
The boom can be operated using valve bank controls mounted into a operators control stand, or operators seat.

## HYDRAULIC HAMMER



We can offer our MQ range of hydraulic hammers that are fully compatible to operate our boom systems or they can be equipped with any other brand of hammer.

## ANCHOR BASE



Steel support to add into the foundations for anchoring heavy load bearing structures.

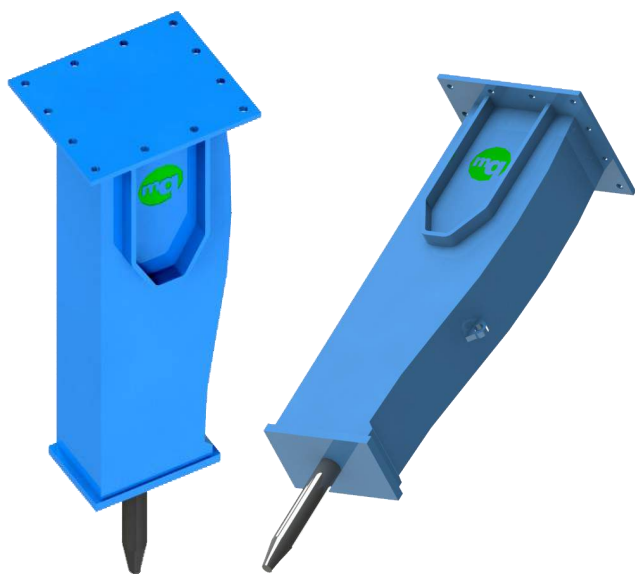
## SUPPORT TOWER



A steel support tower can be used to support heavy equipment. Designed to ensure structural integrity and to gain maximum capacity, they may feature a walkway and ladder.

# ROCK BREAKERS

We offer a full range of hydraulic hammers which complement our boom systems. The power to weight ratio of the MQ range of breakers provides superior efficiency and performance. Designed for improved hydraulic efficiency and safety, our powerful, reliable and durable breakers will significantly increase the productivity of your work.



## FEATURES:

- Energy of piston stroke is accumulated due to charged nitrogen gas
- Valve is easily accessed for maintenance
- Installation designed to be easy and safe for the operator
- Housing design protects against dust and debris
- Sound proofed

## BENEFITS:

- Long service life due to advanced heat treatment process
- Pistons are manufactured using materials proven in intensity, anti-wear, heat resistant, anti-impact etc.
- High efficiency & performance
- Extremely maintenance-friendly

BREAKER SPECIFICATIONS																
MODEL	MQB10	MQB20	MQB30	MQB40	MQB43	MQB45	MQB80	MQB160	MQB200	MQB200F	MQB220	MQB220A	MQB300	MQB320	MQB350	MQB450
BODY WEIGHT (kg)	46	70	89	155	214	281	479	620	849	858	924	956	1100	1311	1440	1931
WEIGHT (kg)	102	126	152	295	375	571	861	1296	1840	1968	1825	1858	2540	2635	2850	3990
LENGTH (mm)	1135	1262	1342	1600	1860	2100	2326	2604	2687	2600	2828	2828	3020	3255	3395	3709
WORKING PRESSURE (kg/ cm2)	80-110	80-110	90-120	110-140	120-150	127-147	150-170	150-170	160-180	160-180	160-180	160-180	160-180	160-180	160-180	160-180
OIL FLOW (l/ min)	12-25	20-10	25-50	40-70	50-90	45-85	80-110	90-120	130-150	145-180	120-180	120-180	150-190	180-240	200-260	210-290
IMPACT RATE (bpm)	800-1400	700-1200	600-1200	500-900	400-800	400-800	350-700	400-530	400-800	360-460	350-500	350-500	350-700	300-450	250-400	200-350
IMPACT ENERGY (j)	203	290	320	690	900	1300	2100	2900	3588	7000	4200	4500	7000	6500	9000	12000
DIA OF HOSE (inch)	1/2	1/2	1/2	1/2	1/2	3/4	3/4	1	1	1	1	1	1	1 1/4	1 1/4	1 1/4
TOOL DIAMETER (mm)	40	45	53	68	75	85	100	125	135	135	140	140	150	155	165	175
TOOL DIAMETER (inch)	1.5	1.7	2.1	2.7	2.9	3.3	3.9	4.9	5.3	5.3	5.5	5.5	5.9	6.1	6.5	6.9
TOOL LENGTH (mm)	430	500	580	702	710	745	1055	1130	1200	1200	1300	1300	1300	1500	1500	1600
TOOL WEIGHT ( kg)	4	8	10	18	22	29	57	98	119	119	136	136	160	190	224	260
BUCKET RANGE (m3)	≥ 0.07	0.03—0.1	0.06—0.2	0.15—0.3	0.25—0.35	0.25—0.5	0.4—0.6	0.5—0.7	0.6—0.8	0.6—0.8	0.7—0.9	0.7—0.9	0.9—0.12	1.1—1.4	1.2—1.7	1.4—2.0
CARRIER WEIGHT (ton)	0.8—2.5	1.2—3.0	2.5—4.5	4—7	6—9	7—14	10—15	15—21	18—26	18—26	18—26	18—26	27—35	28—35	30—45	40—55
MAIN VALVE TYPE	Inward	Inward	Inward	Inward	Inward	Inward	Inward	Inward	Outward	Outward	Inward	Inward	Outward	Inward	Inward	Inward



# TRANSPORTATION

As our products are shipped globally they must be safely and easily transported. We supply the boom system as one complete unit mounted on a platform. Site specific optional supporting steelwork can be supplied as part of the package, pre-fabricated for easy installation.



## INSTALLATION

At McQuaid Engineering Ltd. we can take care of the installation and commissioning of our boom systems for our customers, globally. From the primary planning stage, organising equipment and manpower, to implementing the project on-site and carrying out follow up meetings with your staff, our team can oversee each step of the process to ensure that installations are on time and under budget. We will keep in close contact with our customers throughout the process to ensure that everyone is fully informed in terms of budget, safety and installation times. After installing any new boom system, we will conduct rigorous on-site testing to ensure that the system is working to maximum productivity.

When your equipment is installed and running, we remain accessible and are available to support your needs. We can deliver employee training programs based on our extensive knowledge and expertise, aligned with safety and maintenance training in accordance with global best practices.



# CUSTOMER SUPPORT

**From the initial enquiry you make with McQuaid Engineering Ltd, right through to when you receive your finished product, our dedicated team will be with you each step of the way.** We take great pride in our customer service, providing world class support, delivering 100% customer satisfaction. Our committed customer support team is equipped with the experience and thorough industry and product knowledge to help assist you, whatever the nature of your enquiry.

Whether you are looking to install or commission a single machine or multiple pieces of equipment, our technicians are there to support you at every step of the process. From feasibility and project management to system configuration and training we can handle the installation and commissioning of equipment from start to finish. We offer our customers a complete design to installation service anywhere in the world.



## SPARE PARTS

**At McQuaid Engineering Ltd. we know the importance of quick turnarounds when you have a breakdown on site.** Manufacturing our own components means that we always have a supply of spare parts, so if the need should arise; you can keep production on schedule and minimise costly, unscheduled downtime by getting them direct from us, when you need them.

When it comes to parts, our focus is on quality, service and value. McQuaid spare parts keep your machinery working at peak performance and maximize its resale value. You can be assured that our spare parts have superior durability and ease of fit due to the raw materials and the high quality precision manufacturing.



## AFTERCARE

**Receiving your new McQuaid Engineered product is just the beginning of your relationship with us.** Our comprehensive aftersales solutions cover installation and commissioning of booms, technical trouble shooting and spare parts for all our products. We offer the highest level of customer care, staying in contact with each customer until their situation is resolved.

We understand that time is money, and that even with regular evaluations and mechanical audits of your equipment, unanticipated downtime can occur. Our comprehensive service ensures that our customers get the professional support and technical advice they need, when they need it.









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