



**BREAKER  
TECHNOLOGY,  
INC.**

an Astec company

# **BX & BXR** *Hydraulic Breakers*

## **Features & Benefits**

### ***Recoil Energy Capture System***

The effective oil regeneration system on the BXR Series captures hydraulic oil used in the downward stroke of the piston and uses this oil to assist in lifting the piston for the next blow. This design boosts blow speed without the need for additional flow, resulting in higher production rates.

### ***Long / Short Stroke Selection***

Operator controlled long or short stroke selection on the BXR Series instantly shifts between high blow energy (low speed, long stroke) to low blow energy (high speed, short stroke) with the flip of a switch. This maximizes production rates in varying material conditions.

### ***Manual Speed Selection***

The BX8 to BX40 breakers are equipped with a manual high or low speed select located on the breaker. Switching to high speed allows for improved production rates in softer material such as concrete.

### ***Anti-Blank Fire***

An anti-blank fire on/off selector on the BX8-BX40, and an interlock on the BXR Series prevents the blank fire of the tool, thereby reducing shock loading to the retaining pins and front head.

### ***Underwater Operation Port***

A remote air port at the top of BX10 and larger breakers allows for underwater operation with the addition of a compressed air supply.

### ***Remote Greasing***

A remote located greasing port on the BX10 and larger is situated near the top of the breaker close to the main hydraulic circuit providing a convenient interface to carrier-mounted remote greasing systems, the use of which contributes to breaker longevity.

### ***Exceptional Silence and Structural Integrity***

Boxed section housings provide excellent strength, while remaining lightweight. The suspended boxed housing design reduces vibration to the carrier without metal-to-metal contact.

### ***Narrow Front Head***

The narrow box-housing design is well suited to tight trenching conditions. The narrow profile allows optimum visibility and access when working in tight quarters.



# BXR Series Hydraulic Breakers

## Sizing the Breaker based on Production Rates



		BXR50	BXR65	BXR85	BXR100	BXR120	BXR160
Energy Class	ft-lbs	5,000	6,500	8,500	10,000	12,000	16,000
	Joules	6,800	8,800	11,500	13,500	16,300	21,700
Operating Weight (including top bracket)	lbs	4,200	4,860	6,500	7,800	9,050	12,400
	kg	1,900	2,200	2,950	3,540	4,100	5,630
Overall Length (including standard bracket)	in	107	114	133	137	143	160
	mm	2,700	2,900	3,370	3,480	3,620	4,060
Oil Flow Range	gpm	38-54	42-60	53-75	63-90	74-105	85-120
	lpm	144-204	159-227	201-284	239-341	280-398	322-454
Working Pressure Range	psi	2,150-2,700	2,150-2,700	2,150-2,700	2,150-2,700	2,150-2,700	2,150-2,700
	bar	150-190	150-190	150-190	150-190	150-190	150-190
Blow Rate	Long Stroke*	bpm	374-531	341-488	294-417	294-480	231-374
	Short Stroke*	bpm	514-730	454-649	368-521	368-600	298-484
Tool Diameter	in	5.5	5.9	6.3	6.7	7.1	7.9
	mm	140	150	160	170	180	200
Exposed Tool Length	in	25.1	26.2	29.0	30.0	31.0	36.5
	mm	636	665	746	771	807	932
Recommended Carrier Weight	lb	37,500-66,100	41,900-88,200	61,730-110,225	74,950-149,900	92,600-178,600	121,300-220,500
	m tonne	17-30	19-40	28-50	34-68	42-81	55-100
Underwater provision hole		standard	standard	standard	standard	standard	standard
Auto grease provision hole		standard	standard	standard	standard	standard	standard
2-stroke remote control		standard	standard	standard	standard	standard	standard
Oil regeneration system		standard	standard	standard	standard	standard	standard
Anti-blank fire interlock		standard	standard	standard	standard	standard	standard
Grease unit installed on breaker		optional	optional	optional	optional	optional	optional
Grease unit installed on excavator		optional	optional	optional	optional	optional	optional
Silenced box housing		standard	standard	standard	standard	standard	standard
Severe duty wear kit		optional	optional	optional	optional	optional	optional

\* the maximum bpm includes the effects of the energy recovery system



### Optional Breaker Mounted Lube System



Available on models BX15 up to BXR160; a lubrication system provides a constant supply of grease to the tool and bushing, prolonging component life.

### Tools

**Blunt**

**Chisel**

**Moil**



### Optional Severe Duty Wear Kit



Available on models BX20 up to BXR160; a severe duty wear package protects the breaker housing in abrasive raking applications.

## Maximize production and minimize costs

The BXR Series uses recoil sensing technology with operator actuated two-speed control and an oversized piston.

This combination maximizes blow energy and bpm's under varying rock conditions.

For example, in hard rock conditions, the bpm's are increased providing up to 80% operating efficiency versus 50% efficiency of a conventional breaker:



Excavator  
20 metric tonne/  
44,100 lb

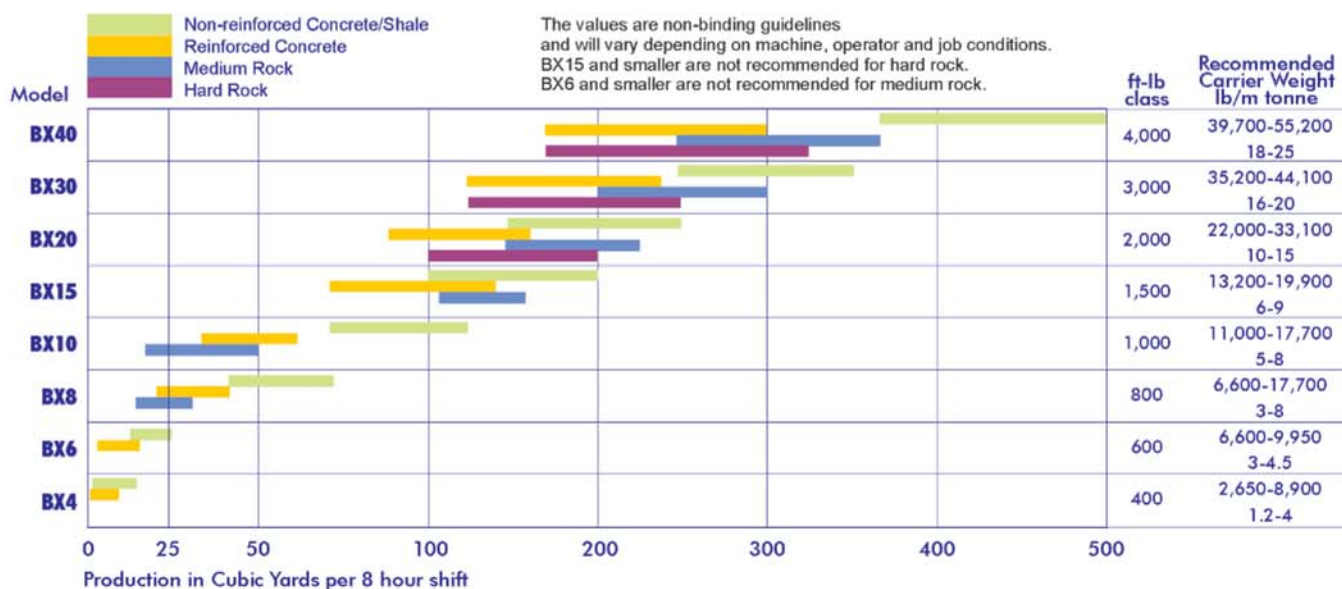
Breaker Model	TB980	BXR50
ft lb class	4,500	5,000
gpm	55	54
psi	2,600	2,700
Efficiency	50%	80%
Horsepower applied to the rock	41	64

Increased  
horsepower  
to the rock =  
higher  
production



# BX Series Hydraulic Breakers

## Sizing the Breaker based on Production Rates



		BX4	BX6	BX8	BX10	BX15	BX20	BX30	BX40
Energy Class	ft-lbs	400	600	800	1,000	1,500	2,000	3,000	4,000
	Joules	550	800	1,100	1,350	2,000	2,700	4,100	5,400
Operating Weight (including top bracket)	lbs	420	440	735	948	1,355	2,050	2,668	3,830
	kg	190	200	333	430	615	930	1,210	1,740
Overall Length (including standard bracket)	in	53	54	63	71	78	88	97	109
	mm	1,350	1,380	1,600	1,800	1,980	2,225	2,455	2,760
Oil Flow Range	gpm	7-11	8-13	8-14	12-21	14-27	24-29	27-37	29-42
	lpm	25-40	30-50	30-55	45-80	50-100	90-110	100-140	110-160
Working Pressure Range	psi	1,300-1,740	1,300-1,740	1,450-2,000	1,450-2,000	1,450-2,000	1,740-2,300	1,740-2,450	1,900-2,450
	bar	90-120	90-120	100-140	100-140	100-140	120-160	120-170	130-170
Blow Rate High speed	bpm	550-950	400-1,000	350-900	350-900	300-700	350-550	350-550	350-500
	bpm	n/a	n/a	450-1,000	450-1,000	550-950	500-750	500-850	450-600
Tool Diameter	in	2.1	2.4	2.8	3.1	3.3	4.1	4.7	5.3
	mm	53	62	70	78	85	105	120	135
Exposed Tool Length	in	12.8	13.5	16.3	17.5	18.5	21.3	26.5	26.5
	mm	320	345	413	445	465	538	668	668
Recommended Carrier Weight	lb	2,650-8,900	6,600-9,950	6,600-17,700	11,000-17,700	13,200-19,900	22,000-33,100	35,200-44,100	39,700-55,200
	m tonne	1.2-4	3-4.5	3-8	5-8	6-9	10-15	16-20	18-25
Underwater provision hole		n/a	n/a	n/a	standard	standard	standard	standard	standard
Auto grease provision hole		n/a	n/a	n/a	standard	standard	standard	standard	standard
2-stroke remote control		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2-stroke manual selector		n/a	n/a	standard	standard	standard	standard	standard	standard
Anti-blank fire - On/Off Selector		n/a	n/a	standard	standard	standard	standard	standard	standard
Grease unit installed on breaker		n/a	n/a	n/a	n/a	optional	optional	optional	optional
Grease unit installed on excavator		n/a	n/a	n/a	optional	optional	optional	optional	optional
Silenced box housing		n/a	standard	standard	standard	standard	standard	standard	standard
Severe duty wear kit		n/a	n/a	n/a	n/a	n/a	optional	optional	optional



## Shared Features & Benefits

- High strength alloy plate steel construction with abrasion resistant plating; allows continuous duty in harsh environments
- Noise dampening material through the breaker; eliminates metal-to-metal contact
- Top and bottom isolators; absorbs recoil energy
- Cryogenically enhanced, heat treated alloy pistons and precise tolerances; provides high breaker efficiencies
- Short length, large diameter tie rods with integral vibration dampeners; provides an exceptionally strong, rebuildable design
- Remote air breather positioned above the main control valve (BX10-BXR160); provides easy access and clean air intake (+ connection for underwater operation)
- Remote grease line connection and hydraulic porting on power cells (BX10-BXR160); easy accessibility for use with carrier or breaker mounted greasing systems
- Narrow nose design; allows improved visibility and minimal over-breaking in trenching applications
- Oversized, full length, oval retainer pins (BX10-BXR160); excellent resistance to blank fires and expansive load transfer area to front head
- Large tool diameters; longer life and superior transmission of impact energy

## BX Series

- Breaker mounted manual high/low stroke selector (BX8-BX40); improves production capability
- Long stroke piston design; provides high levels of constant blow energy
- Pressure balanced piston; optimizes bpm's and blow energy
- Anti-blank fire on/off selector (BX8-BX40); alternate modes when operating in varying rock conditions
- Optimal sound dampening (BX6-BX40); further lowers noise levels, pertinent in high density population areas

## BXR Series

- Two speed hydraulic pilot power control; controls blow energy in varying material conditions
- Oil regeneration system; increases bpm's without decreasing energy in harder material applications
- High volume nitrogen charged accumulator; provides constant blow energy and recoil absorption
- Extra-long stroke pressure balanced piston in conjunction with oil regeneration system; optimizes impact energy and bpm's
- Button nose piston design; maximizes energy transfer to the tool
- Anti-blank fire interlock; protects front head and retainer pins







**Demolition**



**Construction**



**Quarrying**



**Trenching**



**Mining**



**Excavating**



All dimensions and specifications are approximate and subject to change without notice.

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UNITED STATES EAST 440.248.7168 • UNITED STATES WEST 951.369.0878 • CANADA/INTERNATIONAL 519.599.2015 • rockbreaker.com

