BTi
an Astec Industries Co.

BX & BXR SERIES 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.

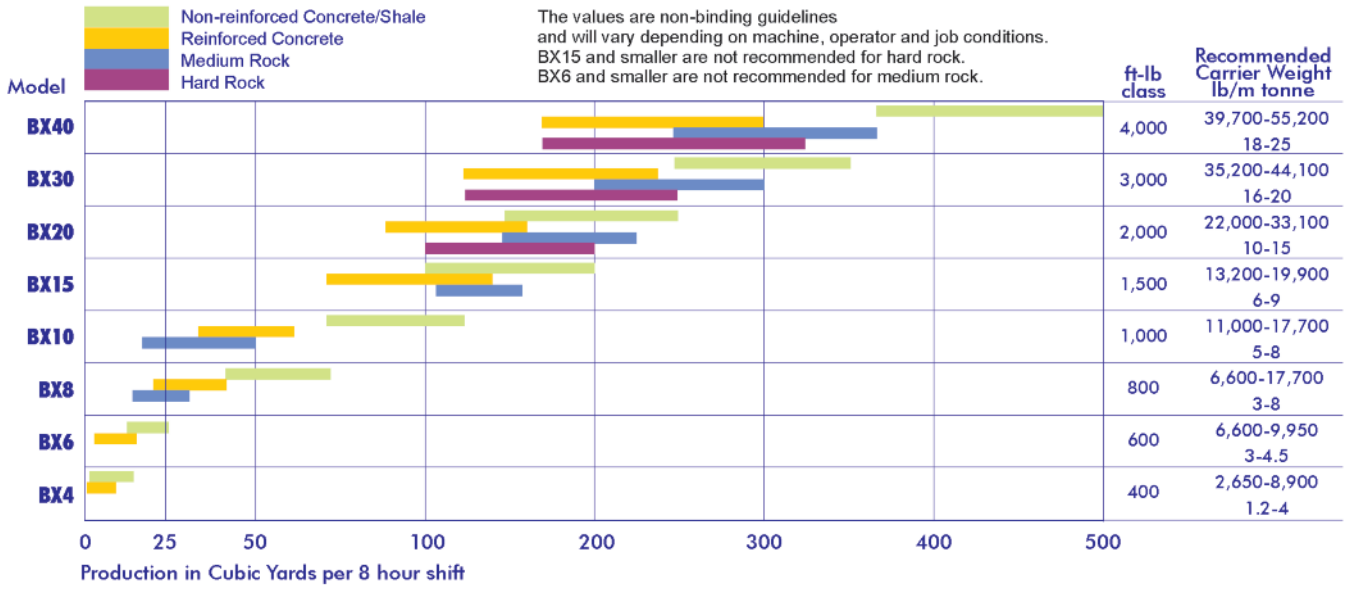
Remote Greasing
A remote located greasing port on the BX10 and larger is situated near the top of the breaker close to the main hydraulic circuit providing a convenient interface to carrier-mounted remote greasing systems, the use of which contributes to breaker longevity.

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.

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	lbs	420	440	735	948	1,355	2,050	2,668	3,830
(including top bracket)	kg	190	200	333	430	615	930	1,210	1,740
Overall Length	in	53	54	63	71	78	88	97	109
(including standard bracket)	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	bpm	550-950	400-1,000	350-900	350-900	300-700	350-550	350-550	350-500
High speed	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	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
Carrier Weight	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

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

Maximize production and minimize costs

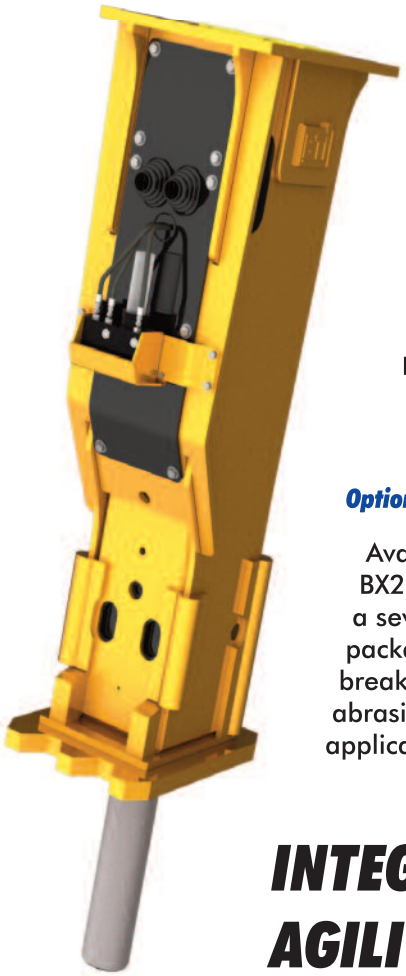
The BXR Series uses recoil sensing technology with operator actuated two-speed control and an oversized piston.

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	2,760
Efficiency	50%	80%
Horsepower applied to the rock	41	64



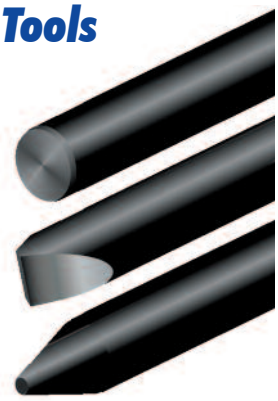
Optional Breaker Mounted Lube System

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

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.

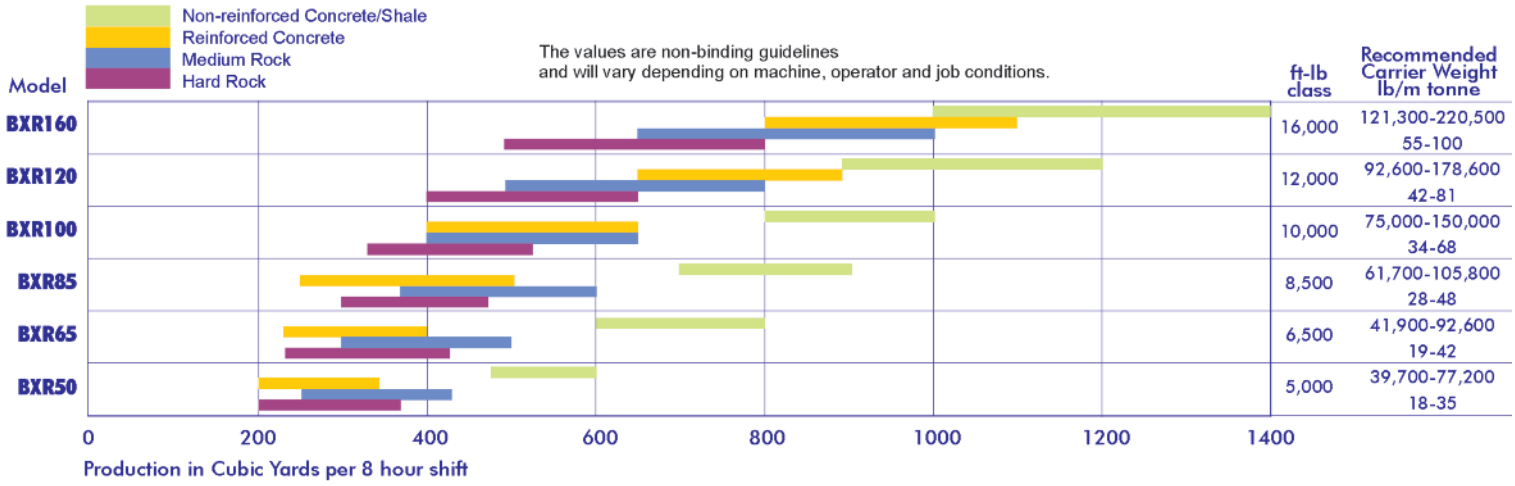
Tools



INTEGRITY
AGILITY
STRENGTH

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	21,500
Operating Weight	lbs	4,200	4,860	6,500	7,800	9,050	12,400
(including top bracket)	kg	1,900	2,200	2,950	3,550	4,100	5,630
Overall Length	in	103	112	127	133	137	155
(including standard bracket)	mm	2,622	2,863	3,241	3,399	3,502	3,943
Oil Flow Range	gpm	40-53	42-56	46-61	62-82	79-106	89-119
	lpm	150-200	158-210	173-230	233-310	300-400	338-450
Working Pressure Range	psi	2,250-2,755	2,250-2,755	2,250-2,755	2,250-2,755	2,250-2,755	2,250-2,755
	bar	155-190	155-190	155-190	155-190	155-190	155-190
Blow Rate Long Stroke*	bpm	387-589	335-514	285-435	317-482	308-474	238-366
Short Stroke*	bpm	445-804	385-684	328-578	365-636	354-592	274-475
Tool Diameter	in	5.5	6.0	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	635	665	745	770	810	930
Recommended	lb	39,700-77,200	41,900-92,600	61,700-105,800	75,000-150,000	92,600-178,600	121,300-220,500
Carrier Weight	m tonne	18-35	19-42	28-48	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

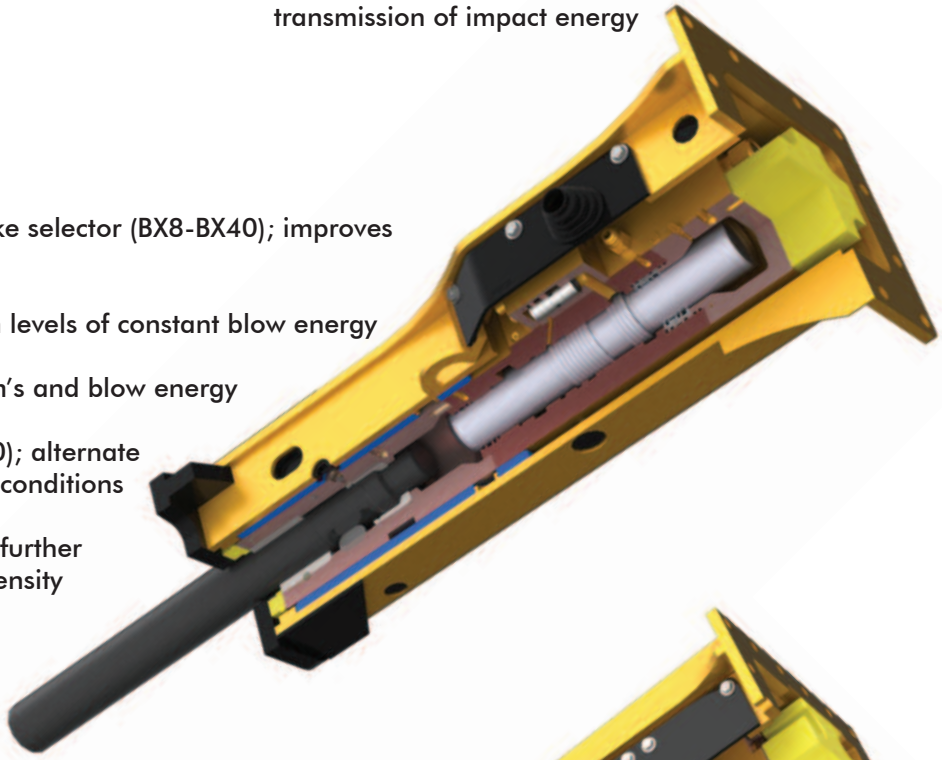
* the maximum bpm includes the effects of the energy recovery system

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

ISO 9001:2008
ISO 14001:2004

Construction
Demolition
Excavating
Quarrying
Trenching
Mining

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