Strength and efficiency

The hydraulic breaker is an equipment of the earth-moving and mining industry, whose components are subjected to high levels of stress, working mostly in difficult situations.
In order to make hydraulic breakers increasingly reliable and guarantee performance and power, Hammer Srl has introduced the SB and FX lines, obtained with in-depth R&D studies carried out in over 30 years of activity.
For the production of these ranges, the best high-alloy steels on the market are used and the best heat treatment techniques developed.
The research and studies carried out have allowed us to obtain important results in terms of the technological and mechanical characteristics of the steels.
At the same time, studies were carried out in collaboration with the main producers of hydraulic seals (Trelleborg, Freudenberg, Nok).
Over the years we have therefore improved the quality of the materials used and the types of the same, so as to adapt them to the right ratio between the variables speed, pressure,
temperature, obtaining thus greater durability.

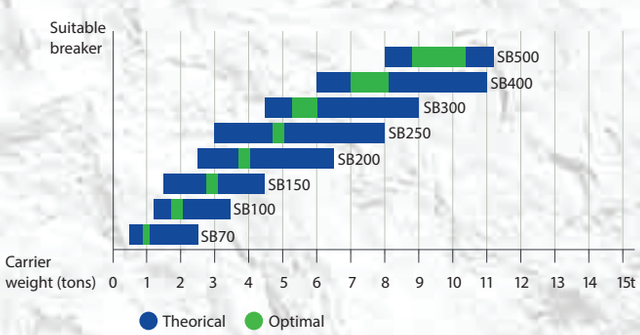
With ref. to SB and FX series, Hammer Srl, thank to its experience, has chosen to design and build "nitrogen" breakers in order to obtain a high power distributed over a higher number of blows per minute, thus resisting high counterpressures up to 25 bar.
The breaker is also very compactly structured to reduce stress on the excavator arm and ensure greater durability of both the breaker itself and its components.

- The SB and FX hydraulic breakers can work on any type of excavator and on any single-acting hydraulic system; they are also suitable for hydraulic systems with high back pressure

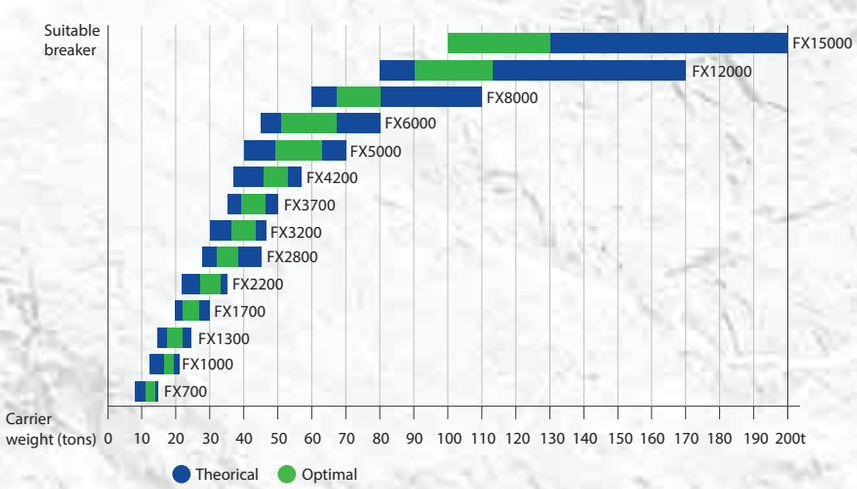
- HAMMER Breakers are equipped with special polyurethane shock absorbers that absorb vibrations,
thus protecting the arm of the excavator and also reduce noise emissions, according to the requirements of directive 2000/14 / EC

The HAMMER breakers of the SB series are suitable for carriers, mini excavators, mini-blades, backhoe loaders, demolition robots. etc...
The HAMMER breakers of the FX series are suitable for medium and large crawler and wheeled excavators, etc...

SB Series

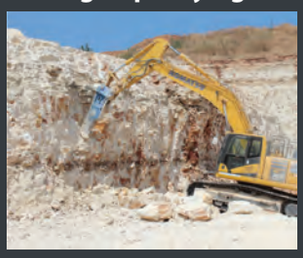


FX Series



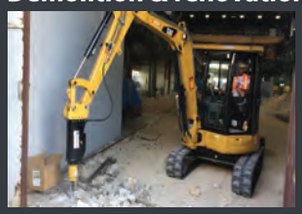
Application overview

Mining & quarrying



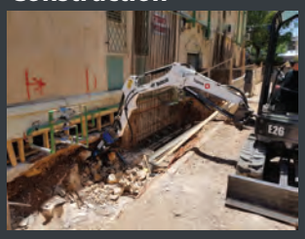
		SB	FX (700-1700)	FX (2200-15000)
Preliminary works	› Overburden removal › Bench, road & ramp leveling › Roof, face & rib scaling	🟢	🟢	🟡
Secondary breaking	› Boulder reduction in rock pile › Removing blockages at crushing systems	🟡	🟢	🟢
Primary rock breaking	› Selective rock breaking › Blast-free mining	🔴	🟡	🟢

Demolition & renovation



Masonry structures	› Brickwork › Natural stone › Autoclaved aerated concrete	🟢	🟡	🔴
Concrete structures	› Lightweight concrete › Standard concrete	🟢	🟢	🟡
	› Heavyweight concrete	🔴	🟡	🟢
Composite steel & concrete structures	› Steel-reinforced concrete › Prestressed concrete › Fiber-reinforced concrete	🟡	🟢	🟢
Pavements	› Asphalt › Concrete › Composite surfaces	🟢	🟢	🟢

Construction



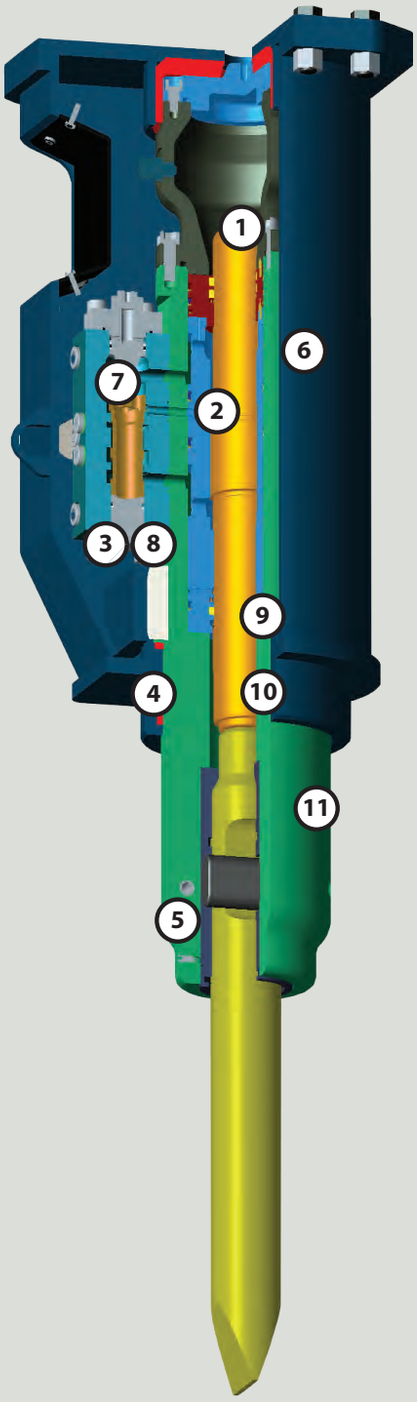
Earthworks	› Trenching › Pit building › Ground excavation	🟡	🟢	🟢
Tunneling	› Tunnel driving › Roof, face & rib scaling › Floor leveling	🟡	🟢	🟢
Dredging	› Canal deepening & extension › Dock deepening & extension	🟡	🟡	🟢
Gardening & Landscaping	› Fencing › Ground excavation › Rock breaking	🟢	🟡	🔴
Foundation works	› Ground leveling	🔴	🟡	🟢
Building construction	› Foundation pile driving	🔴	🟡	🟢

Metallurgical industry

Slag recycling	› Boulder reduction in slag heap › Removing blockages at crushing systems	🟡	🟢	🟢
Cleaning & debricking	› Ladles › Converter mouths › Kilns	🟢	🟡	🔴

🟢 Optimal 🟡 Suitable 🔴 Unsuitable

Features and benefits



SB SERIES

1 More power and less vibration and maintenance
The SB breakers work with inertial nitrogen energy recovery, obtaining more power (more than 30%) and less vibration thanks to the nitrogen chamber which reduces maintenance costs, since it has no diaphragms inside it.

2 Long lasting of the nitrogen charge
In the past, energy recovery breakers required frequent nitrogen refills; with the new sealing system and the new compound developed by Freudenberg they are able to guarantee a gas tightness equal to 300% more than in the past.

3 Protected tubes
The tubes are completely protected through the casing and they're suitable for every type of excavation, especially in narrow spaces.

4 Silenced body
The particular construction, with a closed box casing as well as the insertion of sound-absorbing material, allowed to reach very low noise levels for a breaker.

5 Double retainer pin
The tool locking system with double retainer pin allows an adequate and uniform wear of the same and ensures longer maintenance intervals for the whole locking system.

6 Monobloc body without tie rods
The entire SB series benefits from the particular monobloc construction; this feature gives the structure a very high resistance to leverage, during work. The breaker is built in one only piece and it is without tie rods, thus obtaining more production and less maintenance for our customers.

7 Only two moving parts

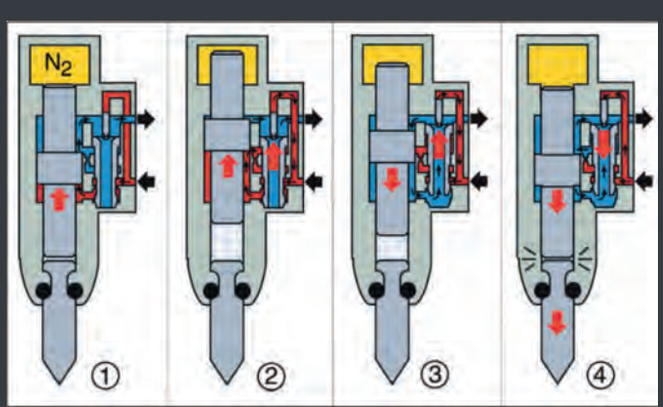
8 For all types of installations (pressurization)
The SB series tolerates high back pressure values and has a wide calibration range of the required oil flow, in order to facilitate installation.

9 The piston moves in a single interchangeable cylinder liner, easy to replace in case of necessity, keeping intact the main body

10 Piston constructed with a special geometry such as to keep a constant energy of impact, as well as reducing breakages in conditions of criticality

11 Visibility and versatility
The breakers of the SB series, with their tapered shape, provide the operator with an excellent view during the work and allow to operate close to the walls, both in narrow section and with open front.

Principle of operation



Tools • SB Series

Moil Point
Suitable for concrete,
for medium-hard and not layered rocks.

Blunt Tool
Suitable for reinforced concrete and very compact rocks.

Pyramid Tool
Suitable for reinforced concrete and very compact rocks.

Chisel Tool
Suitable for medium-hard and layered rocks.

Wood Cutter Tool
Suitable for cutting all types of wood.

Pile Driver
Suitable for planting wooden or concrete poles.

Asphalt Cutter
Suitable for cutting asphalt

EXCAVATION LINE

SB series

Monobloc Hammer hydraulic breaker

DATA SHEET

Complete with:
- N.1 Plate for bracket
- N.2 Tools (chisel, blunt, moilpoint or pydamidal)
- N.1 Nitrogen adapter

Optional:
- N.2 Hoses
- N. Special tools (wood cutter, pile driver, asphalt cutter)
- N.1 Nitrogen bottle 1.5 lt
- N.1 Automatic greaser lube

Model		SB 70	SB 100	SB 150	SB200	SB 250	SB 300	SB 400	SB 500
Peso escavatore Carrier weight Poids de l'engin porteur Trägergewicht Peso excavadora	t	0,5-2,5	1,2-3,5	1,5-4,5	2,5-6,5	3,0-8,0	4,5-9,0	6,0-11	8,0-11
Peso martello Weight Poids Gewicht Peso	kg	70	100	145	190	250	320	430	540
Altezza con utensile standard Height with standard tool Hauteur avec outil standard Höhe inkl. Standardmeissel Altura con puntero estándar	mm	900	1000	1100	1200	1250	1550	1650	1700
Diametro dell'utensile Chisel diameter Diamètre de l'outil Meisseldurchmesser Diámetro del puntero	mm	40	45	48	55	65	75	80	90
Portata olio rich. Required oil supply Débit d'huile nécessaire Erforderliche Ölmenge Caudal del aceite	l/min	13-20	15-30	18-40	25-55	30-60	50-70	75-90	85-110
Pressione dell'olio regolata al martello Oil pressure adjusted to the hammer Pression de l'huile vers le marteau Betriebsdruck Presión del aceite en el martillo	bar	100	110	110	130	140	160	150	150
Numero dei colpi / min. Blows per minute Coups par minute Schlagzahl / Min. Número de golpes/min.	/min	900-1100	900-1100	900-1100	900-1100	900-1100	800-1000	700-900	600-800
Energia del colpo Energy per blow Energie par coup Schlagzahl/ Energia del golpe	J	280	400	580	750	950	1200	1700	2300
Contropressione max Max. back pressure Contre-pression maxi Max. Gegendruck Contrapresión max.	bar	25	25	25	25	25	25	25	25
Diametro tubo entrata Inner diam. IN hose Diam. intèrieur tuyau H.P. Innendurchm. Hammervorlauf Diám. interior manguera presión	inch	1/2"	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"
Diametro tubo uscita Inner diam. OUT hose Diam. intérieur tuyau B.P. Innendurchm. Hammerrücklauf Diám. interior manguera retorno	inch	1/2"	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"

DATA SHEET

SB series
Monoblock hammer hydraulic breaker

Complete with:
- N.1 Plate for bracket
- N.2 Tools (chisel, blunt, moilpoint or pydamidal)
- N.1 Nitrogen adapter

Optional:
- N.2 Hoses
- N. Special tools (wood cutter, pile driver, asphalt cutter)
- N.1 Nitrogen bottle 1.5 lt
- N.1 Automatic greaser lube

Model		SB 70	SB 100	SB 150	SB 200	SB 250	SB 300	SB 400	SB 500
Peso escavatore Carrier weight Poids de l'engin porteur Trägergewicht Peso excavadora	lb	1100/ 5500	2600/ 7700	3300/ 9900	5500/ 14300	6600/ 17600	9900/ 19800	13200/ 24200	17600/ 24200
Peso martello Weight Poids Gewicht Peso	lb	155	220	320	419	551	706	948	1191
Altezza con utensile standard Height with standard tool Hauteur avec outil standard Höhe inkl. Standardmeissel Altura con puntero estándar	inch	35	39	43	47	49	61	64	66
Diametro dell'utensile Chisel diameter Diamètre de l'outil Meisseldurchmesser Diámetro del puntero	inch	1,5	1,7	1,8	2,1	2,5	2,9	3,1	3,5
Portata olio rich. Required oil supply Débit d'huile nécessaire Erforderliche Ölmenge Caudal del aceite	gpm	3,4-5,3	4-8	4,7-10,5	6,6-14,5	7,9-15,8	13,2-18,5	19,8-23,7	22,5-29
Pressione dell'olio regolata al martello Oil pressure adjusted to the hammer Pression de l'huile vers le marteau Betriebsdruck Presión del aceite en el martillo	psi	1450	1595	1595	1885	2030	2320	2175	2175
Numero dei colpi / min. Blows per minute Coups par minute Schlagzahl / Min. Número de golpes/min.	/min	900-1100	900-1100	900-1100	900-1100	900-1100	800-1000	700-900	600-800
Energia del colpo Energy per blow Energie par coup Schlagzahl/ Energia del golpe	J	280	400	580	750	950	1200	1700	2300
Contropressione max Max. back pressure Contre-pression maxi Max. Gegendruck Contrapresión max.	psi	362	362	362	362	362	362	362	362
Diametro tubo entrata Inner diam. IN hose Diam. intérieur tuyau H.P. Innendurchm. Hammervorlauf Diám. interior manguera presión	inch	1/2"	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"
Diametro tubo uscita Inner diam. OUT hose Diam. intérieur tuyau B.P. Innendurchm. Hammerrücklauf Diám. interior manguera retorno	inch	1/2"	1/2"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"