KINSHOFER GROUP COMPANY

KINSHOFER
crane and excavator attachments

HYDRAULIC BREAKERS
KSB and KFX

Break the Smart Way...

KSB-Series for excavators up to 12,5t

The KSB breaker series, for excavators from 0.5 to 12.5t / 1,100 to 27,500 lbs, benefits from a distinctive 'monobloc' design, manufactured in a single piece and without any tie rods – a feature that makes the structure extremely durable and resistant to leverage during operation.

The breakers all work with nitrogen inertial energy recovery – a gas that provides greater machine power and less stress on the excavator arm. Traditionally, breakers with nitrogen energy re-covery require frequent recharges – but with the new KSB-range's special sealing system, the charge-life can be increased by up to 300%.
The series offers unrivalled stability in nitrogen pressure whilst remaining tolerant to back pressure. The distinctive sealed casing design is also sound-proofed, emitting low noise levels during operation.

The new KSB-series has a wide calibration range of the required oil flow for an easier setup.

The tapered shape also ensures excellent visibility during operation, allowing the operator to work close to walls and other structures.

The hose routing is favourable as hoses are within the width of the breaker.

There are seven different tool versions available for many tasks.

Tools for KSB-Series

Moil Point
Suitable for concrete, medium-hard and non-layered rock.

Blunt Tool
Suitable for reinforced concrete and highly compact rock.

Pyramid Tool
Suitable for reinforced concrete and highly compact rock.

Flat Chisel Tool
Suitable for medium-hard and layered rock.

Wood Cutter Tool
Suitable for cutting all types of wood.

Pile Driver
Suitable for planting wooden or concrete poles and posts.

Asphalt Cutter
Suitable for cutting asphalt.

KSB-Series

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

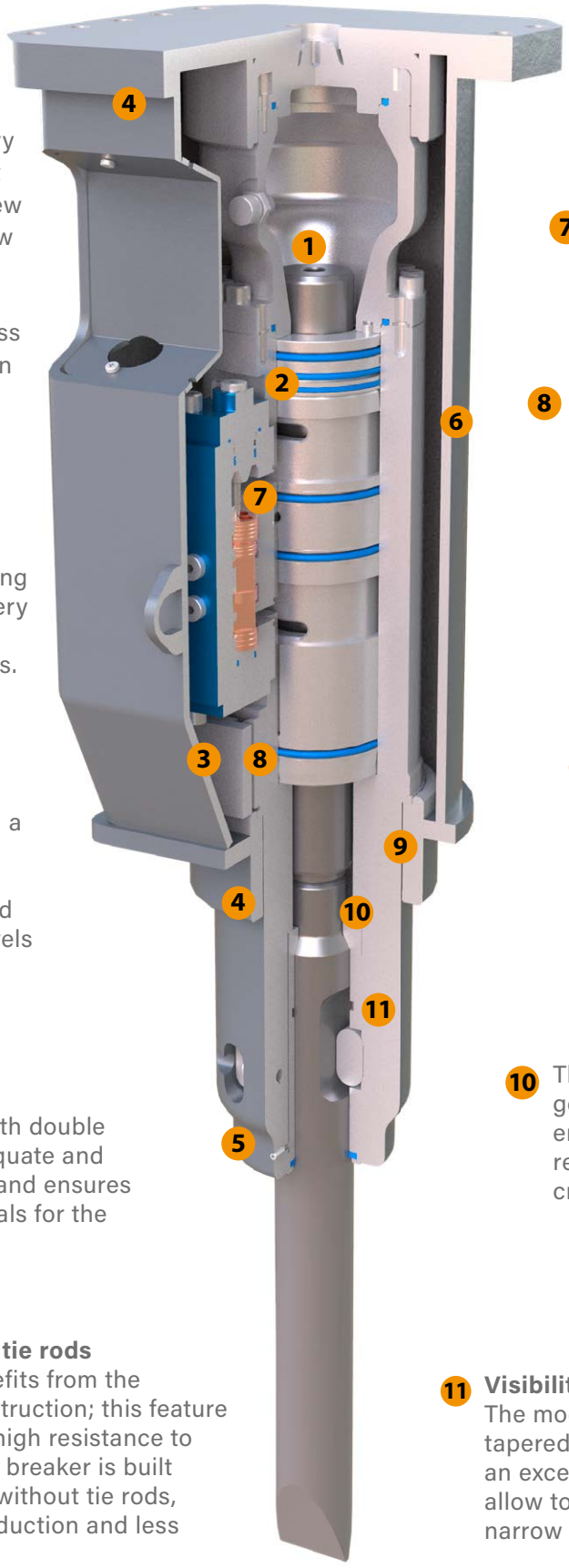
2 Long lasting of the nitrogen charge
In the past, energy recovery breakers required frequent nitrogen refills; with the new sealing system and the new compound developed by Freudenberg they are able to guarantee a gas tightness equal to 300% more than in the past.

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 design, 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 Monoblock body without tie rods
The entire KSB series benefits from the particular monoblock 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 greater production and less maintenance as a result.



7 Only two moving parts

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

9 The piston moves in a single interchangeable cylinder liner that keeps the main body intact and that is easy to replace in case of necessity.

10 The piston is built with a special geometry such as to keep a constant energy of impact, as well as for reducing breakages in conditions of criticality.

11 Visibility and versatility
The models of the KSB 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.

...A Smart Choice!

KFX-Series for excavators up to 200t

The KFX breaker-series, for excavators from 8 to 200t / 17,600 to 440,000 lbs, has two adjusting valves as standard. Firstly, a control valve on the cylinder of the hammer allows the operator to adjust the number of blows generated. A second valve allows the adjustment of the working pressure from 16 to 20 MPa / 2,300 to 2,880 psi.

The standard, inner pipes provide direct greasing of the lower bushing and spacer, improving the longevity of retainer pins and bushings.

Working in tunnels, and even underwater, is also possible by adding air tubes. The KFX breaker-series is available with a range of five different tools, suitable for penetra-ting a variety of surface structures.

There are five different tool versions available for many tasks.

Tools for KFX-Series

Moil Point
Suitable for concrete, medium-hard and non-layered rock.

Blunt Tool
Suitable for reinforced concrete and highly compact rock.

Pyramid Tool
Suitable for reinforced concrete and highly compact rock.

Chisel Tool
Suitable for medium-hard and layered rock.

Cobra Tool
Suitable for quarry works such as primary demolition and block reduction.

Options for KFX-Series

Gallery Kit
A specific system for heavy-duty gallery work, to extend maintenance intervals and reduce costs – comprising bushes and pistons suitable for such a tough working environment. A spray mist kit option for dust abatement is also available, which directs a strong water jet over the tool operation area.

Underwater Kit
Avoid water entering the breaker with a specific underwater kit, for use in the most demanding of environments.

Automatic Greaser for all KFX Models
Greases automatically using the breaker's pressure line to save time and increase productivity – available for mounting on all breaker ranges.

KFX-Series

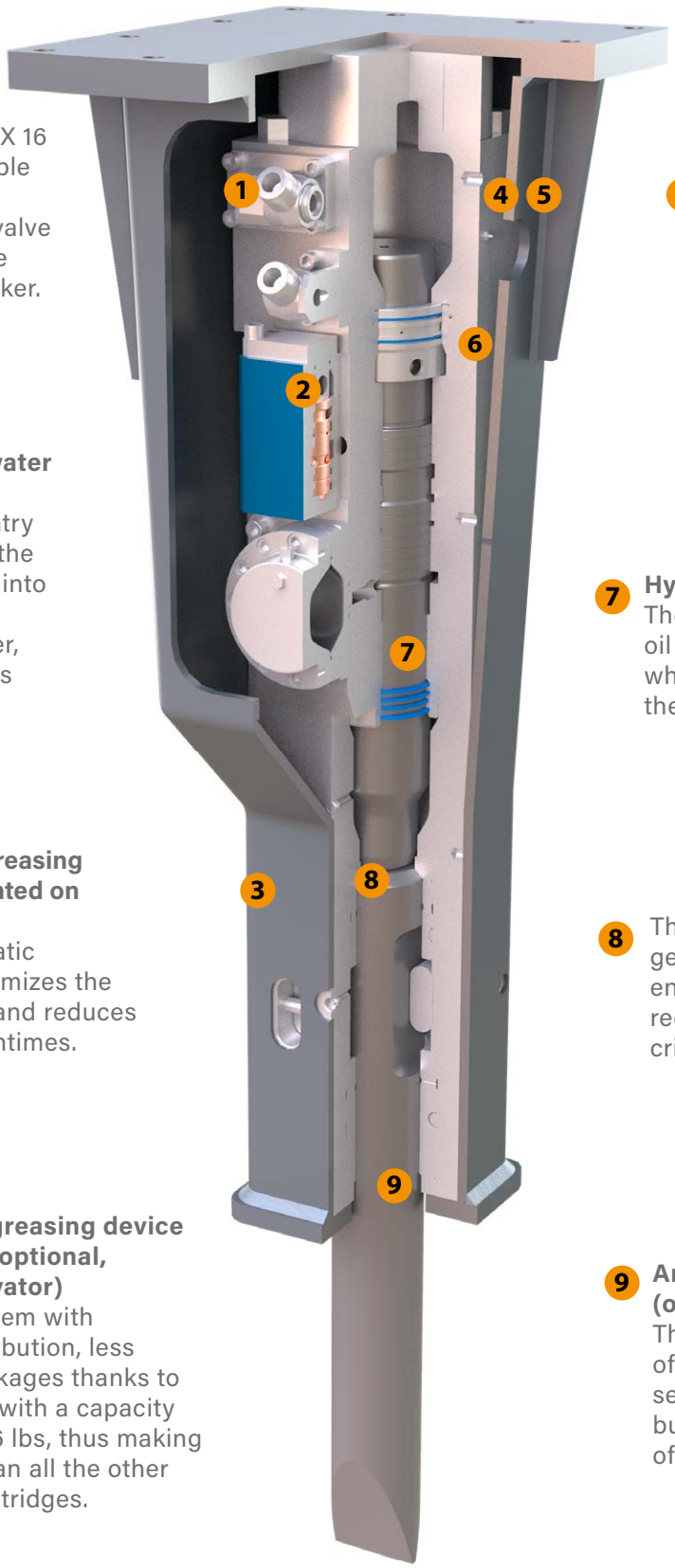
1 Tubes with swivels fully protected from any bad uses and resistant to vibrations in case of lack of nitrogen in the chamber.

2 **Regulation of the operating pressure**
For the KFX-series (KFX 16 to KFX 200), it is possible to adjust the working pressure by a manual valve located frontally, on the distribution of the breaker.

3 **Anti-dust and underwater work set up**
You can prevent the entry of dust and water into the breaker by blowing air into the proper hole in the front part of the breaker, with a pressure not less than 10 bar / 144 psi.

4 **Automatic hydraulic greasing device (optional, mounted on the breaker)**
The Beka-Lube automatic lubrication system optimizes the lubrication procedure and reduces maintenance and downtimes.

5 **Automatic hydraulic greasing device with electric control (optional, mounted on the excavator)**
Innovative electric system with automatic grease distribution, less liable to vibration breakages thanks to its own tank of grease with a capacity of 4 or 8 kg / 8.8 or 17.6 lbs, thus making the system cheaper than all the other devices with single cartridges.



6 **Manual adjustment of blows**
For the KFX-series (KFX 16 to KFX 200), the regulation of the blows is carried out manually by an adjusting valve located on the side of the breaker.

7 **Hydraulic system for blank firings**
The hydraulic system is a regenerative oil circuit that avoids blank firings when the tool is not in contact with the rock.

8 The piston is built with a special geometry such as to keep a constant energy of impact, as well as for reducing breakages in conditions of criticality.

9 **Anti-dust system for tunnels (optional)**
The anti-dust system consists of the addition of a dustproof seal mounted in the lower bush so to avoid the entering of impurities in the circuit.

The breakers of the KFX-series, thanks to their power and efficiency and to the right ratio between weight and power, are suitable for secondary demolition work, excavations in quarry, work in urban areas, tunnels, pipelines and railway tunnels and, concerning the biggest models, demolitions in open pit mining.

KSB and KFX Hydraulic Breakers

Technical Key Features KSB

Type	Operating weight (t / lbs)	Weight of breaker (kg / lbs)	Height w/standard **tool** (mm / in)	Chisel diameter (mm / in)	Blows per minute (/min)
KSB 0	0.5 - 1.4 / 1,100 - 3,080	60 / 132	785 / 30.9	40 / 1.5	800 - 1,700
KSB 1	0.5 - 1.6 / 1,100 - 3,520	70 / 154	810 / 31.9	40 / 1.5	800 - 1,750
KSB 2	1.2 - 2.5 / 2,640 - 5,500	100 / 220	920 / 36.2	45 / 1.7	800 - 2,300
KSB 3	1.5 - 3.8 / 3,300 - 8,360	135 / 297	920 / 36.2	48 / 1.8	800 - 2,000
KSB 4	2.5 - 5 / 5,500 - 11,000	190 / 418	1,145 / 45.1	55 / 2.1	900 - 1,900
KSB 6	3 - 6.5 / 6,600 - 14,300	240 / 528	1,170 / 46.1	65 / 2.5	850 - 1,800
KSB 8	4.5 - 8.5 / 9,900 - 18,700	300 / 660	1,200 / 47.2	75 / 2.9	600 - 1,500
KSB 10	6 - 10 / 13,200 - 22,000	430 / 946	1,515 / 59.6	80 / 3.1	500 - 1,300
KSB 12	8 - 12,5 / 17,600 - 27,500	480 / 1,056	1,565 / 61.6	90 / 3.5	600 - 1,200

Hydraulics KSB

Type	Impact energy (J / ft.lbs)	Oil flow (l/min / GPM)	Operating pressure (bar / psi)	Back pressure **max.** (bar / psi)	Nominal diameter pressure line	Nominal diameter tank line
KSB 0	250 / 185	15 - 30 / 4 - 8	110 / 1,595	30 / 435	1/2"	1/2"
KSB 1	280 / 207	13 - 20 / 3.4 - 5.3	100 / 1,450	30 / 435	1/2"	1/2"
KSB 2	400 / 295	15 - 30 / 4.0 - 7.9	110 / 1,595	30 / 435	1/2"	1/2"
KSB 3	580 / 428	18 - 40 / 4.8 - 10.6	110 / 1,595	30 / 435	1/2"	1/2"
KSB 4	750 / 553	25 - 55 / 6.6 - 14.5	130 / 1,885	30 / 435	1/2"	1/2"
KSB 6	950 / 701	30 - 60 / 7.9 - 15.9	140 / 2,030	30 / 435	1/2"	1/2"
KSB 8	1,355 / 1,000	60 - 85 / 15.9 - 22.5	160 / 2,320	30 / 435	3/4"	3/4"
KSB 10	1,830 / 1,350	75 - 95 / 19.8 - 25.1	150 / 2,170	30 / 435	3/4"	3/4"
KSB 12	2,575 / 1,900	90 - 110 / 23.8 - 29.1	150 / 2,170	30 / 435	3/4"	3/4"

Technical Key Features KFX

Type	Operating weight (t / lbs)	Weight of breaker (kg / lbs)	Height w/standard **tool** (mm / in)	Chisel diameter (mm / in)	Blows per minute (/min)
KFX 16	10 - 17 / 22,000 - 37,400	950 / 2,090	1,940 / 76.4	115 / 4.5	600 - 900
KFX 20	13 - 19 / 28,600 - 41,800	1,200 / 2,640	2,030 / 79.9	120 / 4.7	400 - 900
KFX 26	18 - 24 / 39,600 - 52,800	1,650 / 3,630	2,290 / 90.2	135 / 5.3	400 - 800
KFX 29	22 - 27 / 48,400 - 59,400	1,850 / 4,070	2,515 / 99.0	140 / 5.5	400 - 800
KFX 32	23 - 31 / 50,600-68,200	2,200 / 4,840	2,560 / 100.8	150 / 5.9	400 - 800
KFX 36	28 - 38 / 61,600 - 83,600	2,900 / 6,380	2,740 / 107.9	160 / 6.3	350 - 700
KFX 40	30 - 40 / 66,000 - 88,000	3,200 / 7,040	2,740 / 107.9	160 / 6.3	300 - 650
KFX 47	35 - 50 / 77,000 - 110,000	3,700 / 8,140	3,040 / 119.7	180 / 7.1	300 - 650
KFX 58	36 - 55/ 79,200-121,000	4,400 / 9,680	3,040 / 119.7	180 / 7.1	300 - 650
KFX 70	40 - 65/ 88,000-143,000	4,850 / 10,670	3,090 / 121.7	195 / 7.7	250 - 550
KFX 80	45 - 75/ 99,000-165,000	5,800 / 12,760	3,010 / 118.5	195 / 7.7	250 - 550
KFX 120	60 - 110/ 132,000-242,000	7,800 / 17,160	2,560 / 108.8	215 / 8.5	200 - 400
KFX 150	80 - 170 / 176,000 - 374,000	12,000 / 26,400	2,740 / 107.9	255 / 10.0	150 - 300
KFX 200	100 - 200 / 220,000 - 440,000	14,500 / 31,900	2,740 / 107.9	280 / 11.0	150 - 250

Hydraulics KFX

Type	Impact energy (J / ft.lbs)	Oil flow (l/min / GPM)	Operating pressure (bar / psi)	Back pressure **max.** (bar / psi)	Nominal diameter pressure line	Nominal diameter tank line
KFX 16	2,500 / 1,845	95 - 125 / 25.1 - 33.0	165 / 2,376	25 / 360	1"	1"
KFX 20	3,500 / 2,583	110 - 150 / 29.0 - 39.6	170 / 2,448	25 / 360	1"	1"
KFX 26	5,000 / 3,690	140 - 170 / 37.0 - 44.9	180 / 2,592	25 / 360	1"	1"
KFX 29	6,000 / 4,428	155 - 185 / 40.9 - 48.9	180 / 2,592	25 / 360	1"	1"
KFX 32	7,000 / 5,166	170 - 200 / 44.9 - 52.8	180 / 2,592	25 / 360	1" 1/4	1" 1/4
KFX 36	9,500 / 7,011	190 - 250 / 50.2 - 66.0	180 / 2,592	25 / 360	1" 1/4	1" 1/4
KFX 40	12,000 / 8,856	210 - 270 / 55.5 - 71.3	180 / 2,592	25 / 360	1" 1/4	1" 1/4
KFX 47	13,500 / 9,963	265 - 310 / 70.0 - 81.9	180 / 2,592	25 / 360	1" 1/4	1" 1/4
KFX 58	14,500 / 10,701	275 - 330 / 72.7 - 87.2	190 / 2,736	25 / 360	1" 1/4	1" 1/4
KFX 70	16,500 / 12,177	300 - 360 / 79.3 - 95.1	190 / 2,736	30 / 432	1" 1/4	1" 1/4
KFX 80	17,500 / 12,915	310 - 385 / 70.0 - 101.7	190 / 2,736	30 / 432	1" 1/4	1" 1/4
KFX 120	20,000 / 14,760	390 - 450 / 103.0 - 118.9	190 / 2,736	30 / 432	1" 1/4	1" 1/4
KFX 150	27,000 / 19,926	490 - 580 / 129.5 - 153.2	190 / 2,736	30 / 432	1" 1/2	1" 1/2
KFX 200	30,000 / 22,140	510 - 620 / 134.7 - 163.8	190 / 2,736	30 / 432	1" 1/2	1" 1/2

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