

HYDRAULIC BREAKERS



WHERE EXPERIENCE COUNTS

TRADITION AND HIGH-TECH FROM ONE COUNTRY

Japan, a country of old traditions, has proven its technical performances in many different ways. Already many years ago Japanese electronic equipment contributed greatly to the possibility to reach the moon and other planets. In almost every computer, telephone or any other kind of electronic equipment we can find some Japanese components. In the car industry Japanese engineers have achieved high performances in order to produce more efficient and economical cars. Car tests in different countries have often concluded that Japanese cars are the most reliable and with a minimum of maintenance cost. Also Furukawa is one of those traditional concerns that could show continuous growth through their ongoing product improvement and development.

Everything started in 1875, when Furukawa opened the Kusakura Copper Mine. The mining always required new and specific solutions to improve the production. For this reason Furukawa started in 1900 to produce their own mining equipment, which led to higher production levels at the mine. With this step Furukawa unintentionally created the base for a new, high technology concern. The better results with their custom-made machinery soon created a demand for similar machines in other mines. To be able to fulfil these requirements, Furukawa started to separate their activities into different divisions.

In 1918 Furukawa Mining Co. Ltd was founded and in 1920 Furukawa Electric Co. Ltd. Later in 1961 the start of Furukawa Rock Drill Co. Ltd was an answer to the demand to be able to sell worldwide the machines, that initially were meant only for their own use. In 1971 Furukawa established a new factory in Yoshii for the production of crawler drills and demolition equipment. The demand for those products was so large, that in 1976 a second production unit was established in Takasaki. Since then, from these two factories, more than 150.000 hydraulic breakers have been delivered all over the world. In the meantime the Furukawa Rock Drill division has built an international sales and service network, which secures an optimum after sales service for all the equipment.

We take our slogan "WHERE EXPERIENCE COUNTS" as serious as other Japanese traditions and hope you will approach us with your specific demands.



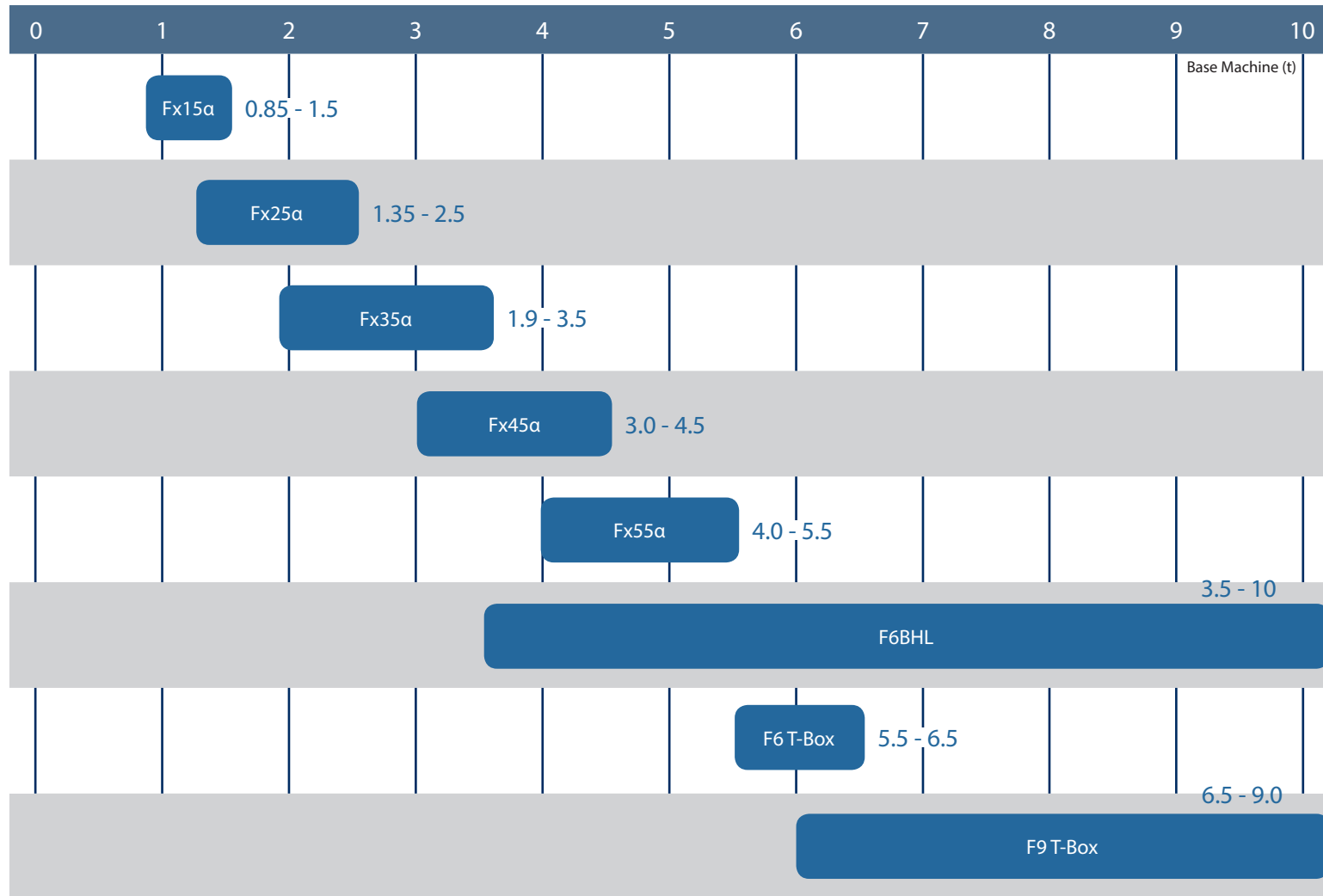
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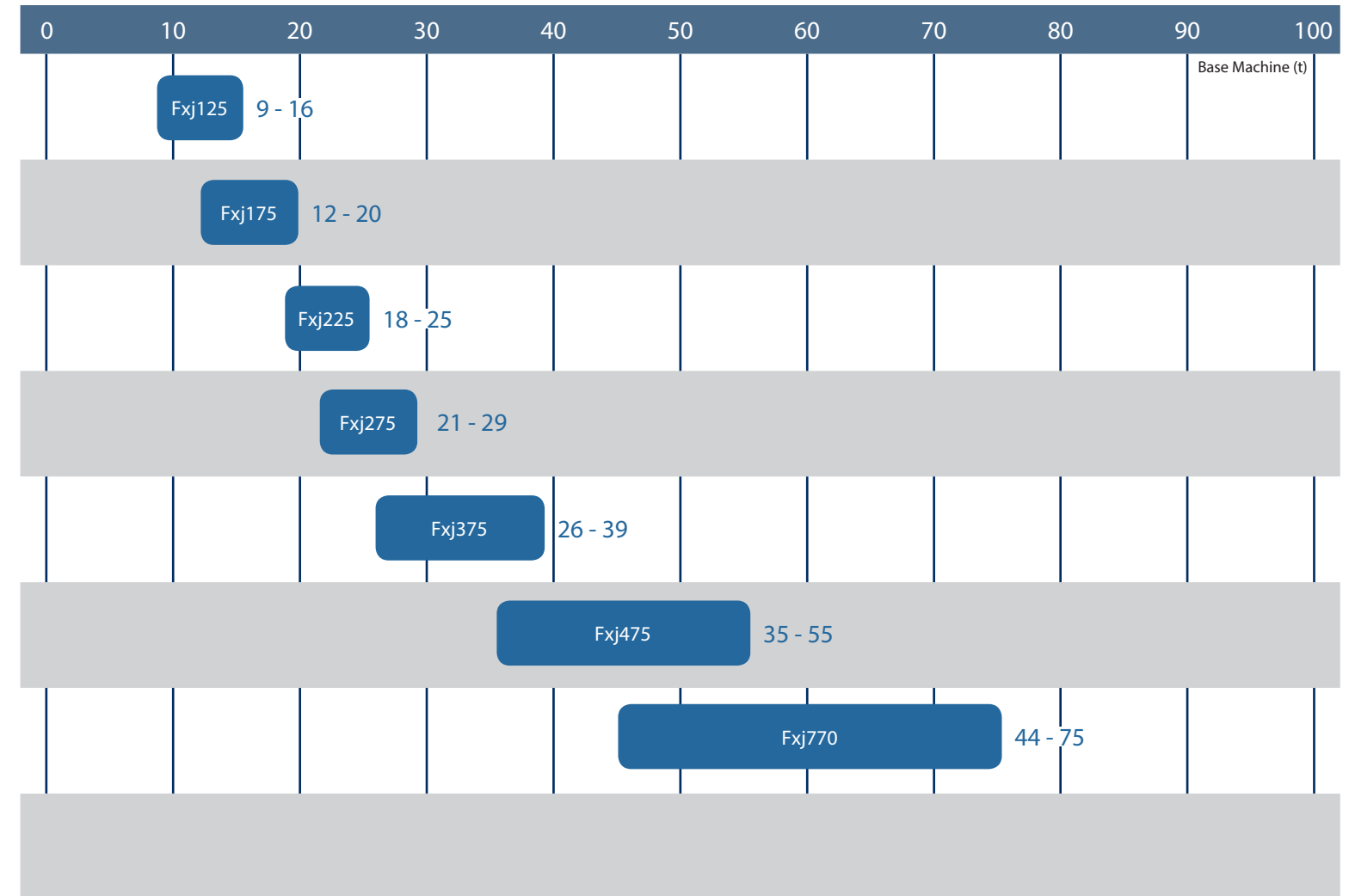
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SMALL & MEDIUM SERIES



Fxj SERIES



ITS THE SMALL THINGS IN LIFE THAT COUNT



Fx SERIES

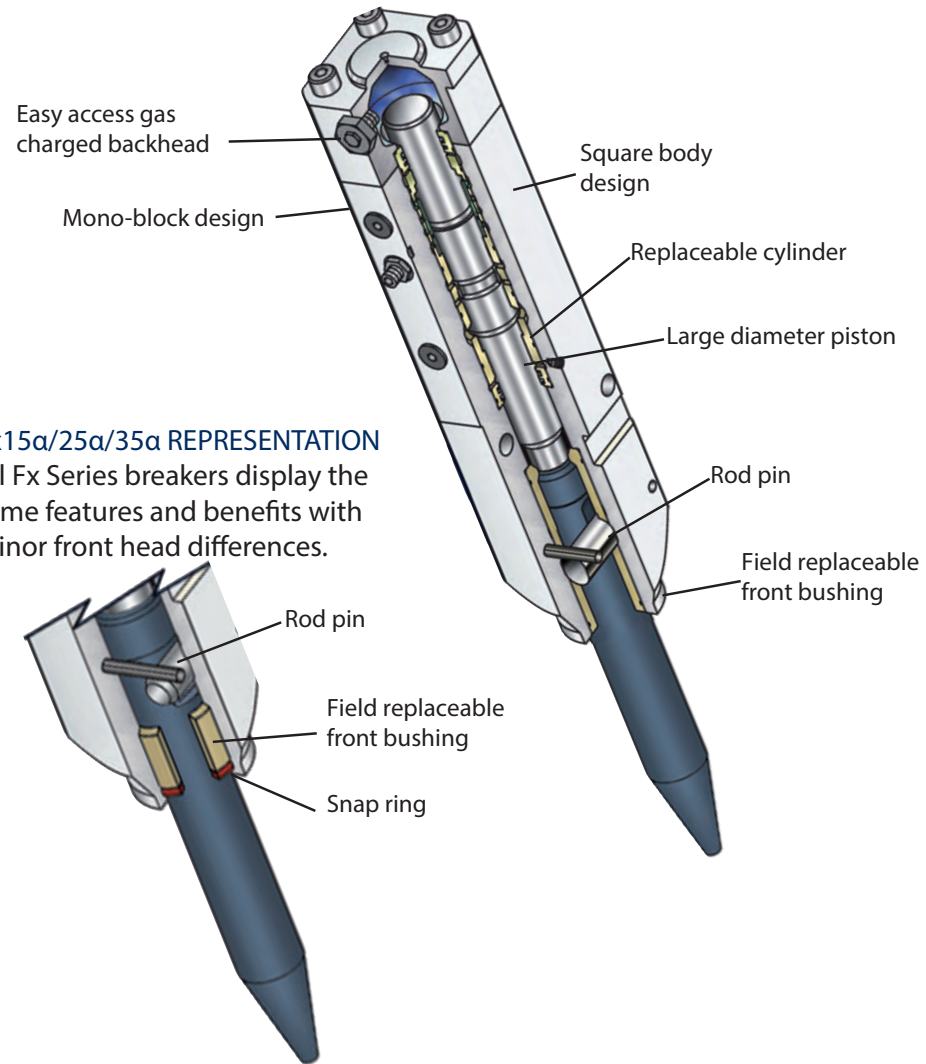
	Job	Specification	
Construction	Gardening & landscaping	Fencing, ground excavation, rock breaking	●
	Earthworks	Trenching, pit building, ground excavation	●
	Dredging	Canal deepening & extension Dock deepening & extension	●
	Tunnelling	Tunnel driving, roof, face & rib scaling Floor levelling	●
Demolition & renovation	Masonry structures	Brickwork, natural stone Autoclaved aerated concrete	●
	Concrete structures	Lightweight concrete Standard concrete	●
	Pavements	Asphalt, concrete, composite surfaces	●
	Composite steel & concrete structures	Steel-reinforced concrete, pre-stressed concrete, fibre-reinforced concrete	●
Mining & quarrying	Preliminary works	Overburden removal, bench, road & ramp levelling, roof, face & rib scaling	●
	Secondary breaking	Boulder reduction in rock pile, removing blockages at crushing systems	●
Metallurgical industry	Cleaning & de-bricking	Ladles, converter mouths, kilns	●
	Slag recycling	Boulder reduction in slag heap, removing blockages at crushing systems	●

● Optimal ● Suitable

THE REVOLUTION IN MINI EXCAVATORS

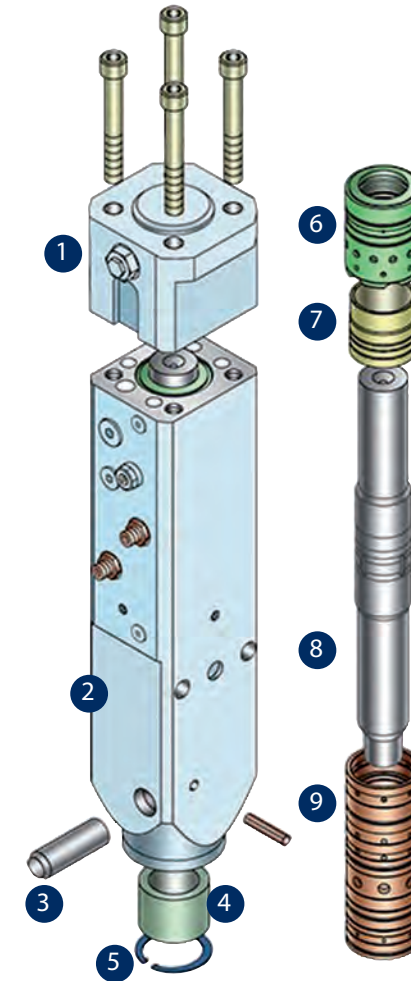
FEATURES & BENEFITS

- Mono-block design
- No through bolts
- Designed with replaceable cylinder liners for saving maintenance cost and downtime
- No diaphragm
- Field replaceable front bushing keeps rods in peak performance
- Extended front bushing for maximum service life (Fx45a/55a)
- Wide oil flow range for fast, hard-hitting performance and more carrier options
- A wide variety of working rods
- Rod pin for increased rod contact and double service life (Fx45a/55a)
- One strategically located warehouse facility with extensive rod inventories assuring on-time deliveries



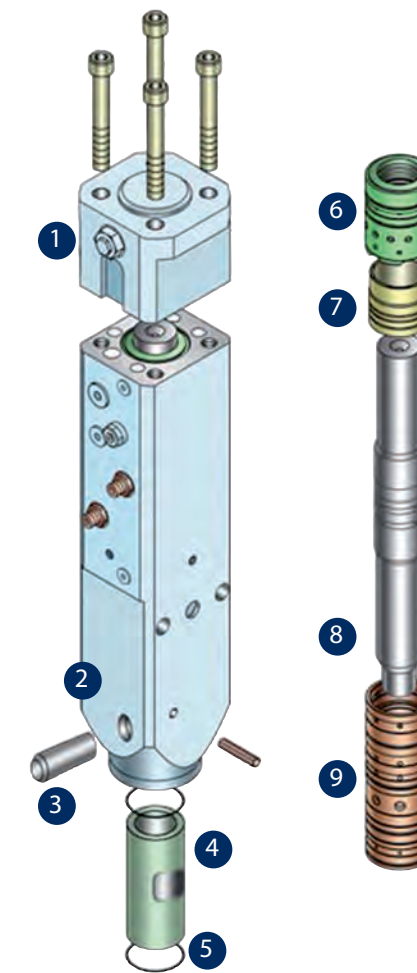
Fx15a/25a/35a REPRESENTATION
All Fx Series breakers display the same features and benefits with minor front head differences.

Fx15a/25a/35a



1. Back Head
2. Mono-Block Cylinder
3. Rod Pin
4. Front Bushing
5. Snap Ring
6. Seal Retainer
7. Valve
8. Piston
9. Cylinder Liner

Fx45a/55a



1. Back Head
2. Mono-Block Cylinder
3. Oval rod Pin
4. Front Bushing
5. Top & Bottom O-Rings
6. Seal Retainer
7. Valve
8. Piston
9. Cylinder Liner

TYPE OF FRAMES

PIN AND BUSH



The easiest way to fix a hydraulic breaker on an excavator. Order the appropriate pin & bushing set and you can fix your hydraulic breaker on an excavator arm.

SILENCE



Noise reduction is required in the workplace and you have the beginning of the Silent part of our offered possibilities. The frame is up to 6 dB(A) quieter than the standard frame.

XTRA SILENCE

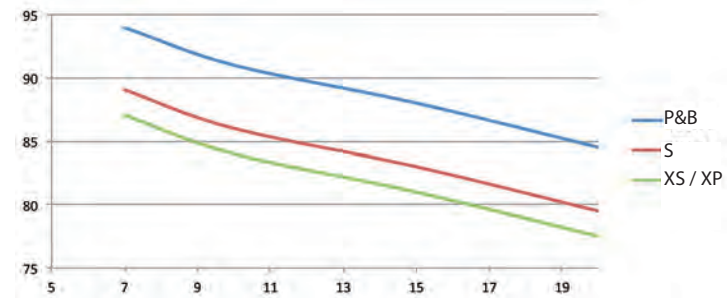


With the Xtra frame we currently offer the maximum in noise reduction. The optimal management of the hammer in the frame in conjunction with the patented design of the FRD rod gives up to 4 dB(A) noise reduction than the Silence version.

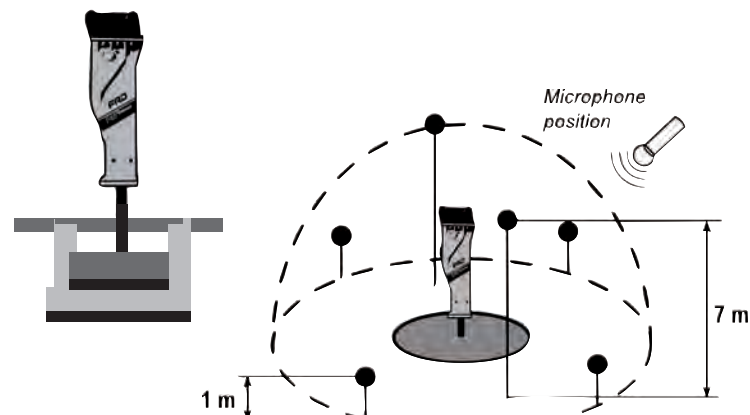


SOUND POWER & SOUND PRESSURE

These are two distinct and commonly confused characteristics of sound. Sound power is the acoustical energy emitted by the sound source, and is an absolute value. It is not affected by the environment. Sound pressure levels quantify in decibels the intensity of given sound sources. Sound pressure levels vary substantially with distance from the source, and also diminish as a result of intervening obstacles and barriers, air absorption, wind and other factors. Sound pressure is what our ears hear and what sound pressure level meters (SPL meters) measure.



Sound level	Fx15a	Fx25a	Fx35a	Fx45a	Fx55a
PIN & BUSH (PB)	116 dB	118 dB	124 dB	126 dB	126 dB
SILENCE (S)	-	112 dB	119 dB	120 dB	119 dB
XTRA SILENCE (XS)	-	110 dB	117 dB	117 dB	116 dB



Half sphere measurement radius $r = 10\text{ m}$

$$L_{WA,g} = L_p - k_1 - k_2 + 10 \cdot \log(s/s_0) + K$$

Guaranteed Sound Power level (under L_p)
 Measured Sound Pressure (under L_p)
 Correction Excavator Noise (under k_1)
 Correction Sound reflexion surroundings (under k_2)
 Conversion of measure distance (under $10 \cdot \log(s/s_0)$)
 Surcharge Measure assurance (under K)



Fx SERIES

Fx15a



P&B



Fx45a



P&B



S



XS



Fx25a



P&B



S



XS



Fx55a



P&B



S



XS



Fx35a



P&B



S



XS



		Fx15a	Fx25a	Fx35a	Fx45a	Fx55a
Operating weight, P&B ¹⁾	kg	60	83	129	165	220
Operating weight, ¹⁾ S and XS ²⁾	kg		118	167	220	292
Height with rod, pin and bush	mm	924	1030	1172	1345	1388
Height with rod, S	mm		943	1042	1150	1248
Height with rod, XS	mm		993	1048	1138	1234
Operating pressure	min MPa	10	10	12	12	12
	max	14	14	16	16	16
Oil flow	min l/min	10	18	24	30	40
	max	28	35	52	60	85
Impact rate 1/min	min bpm	600	600	600	600	500
	max	1500	1500	1300	1100	1100
Rod diameter Ø	mm	36	45	52	60	68
Effective length Rod	mm	234	293	322	355	378
Weight Rod	kg	2.6	5	8	11	15
Hose inner dia Ø HD, ND	mm	9	12	12	12	12
Guaranteed noise level	S dB(A)		112	119	120	119
	XS dB(A)		110	117	117	116
Base machine weight	t	0.85 - 1.5	1.35 - 2.5	1.9 - 3.5	3.0 - 4.5	4.0 - 5.5

¹⁾ Operating weight with top bracket. ²⁾ S and XS Silent Version = Sound and vibration damping

Specifications subject to change without notice

TYPE OF JOBS



F6 / F9

	Job	Specification	
Construction	Gardening & landscaping	Fencing, ground excavation, rock breaking	●
	Earthworks	Trenching, pit building, ground excavation	●
	Dredging	Canal deepening & extension Dock deepening & extension	●
	Tunnelling	Tunnel driving, roof, face & rib scaling Floor levelling	●
	Foundation works	Ground levelling	●
	Foundation	Foundation pile driving	●
Demolition & renovation	Masonry structures	Brickwork, natural stone Autoclaved aerated concrete	●
	Concrete structures	Lightweight concrete Standard concrete	●
	Pavements	Asphalt, concrete, composite surfaces	●
	Composite steel & concrete structures	Steel-reinforced concrete, pre-stressed concrete, fibre-reinforced concrete	●
Mining & quarrying	Preliminary works	Overburden removal, bench, road & ramp levelling, roof, face & rib scaling	●
	Secondary breaking	Boulder reduction in rock pile, removing blockages at crushing systems	●
Metallurgical industry	Cleaning & de-bricking	Ladles, converter mouths, kilns	●
	Slag recycling	Boulder reduction in slag heap, removing blockages at crushing systems	●

● Optimal ● Suitable

MEDIUM SIZE BREAKERS

THE BEST FRAME FOR YOUR REQUEST

BHL



The easiest way to fix a hydraulic breaker on a backhoe loader. FRD has for each backhoe the right setting.

FLAT TOP



The cheapest solution is to attach the breaker with different systems. With the FT framework easy to grow, you have the base mounting plates for quick-change systems of all kinds.

SILENCE

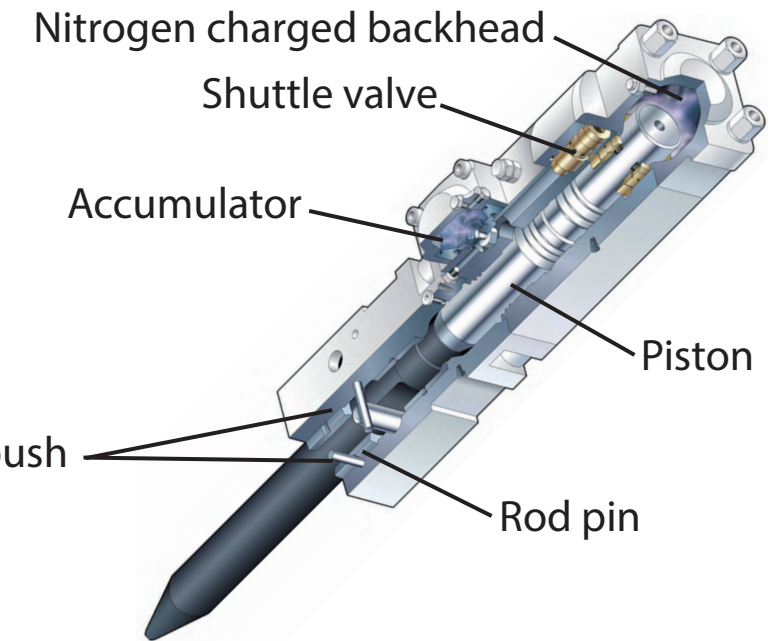


Noise reduction is required in the workplace; you have the beginning of the Silent part of our offered possibilities. The frame is up to 6 dB(A) quieter than the standard frame.

SILENCE



The F9 is only in a LN Frame. The standard or special housing can be made on request.



Features and Benefits:

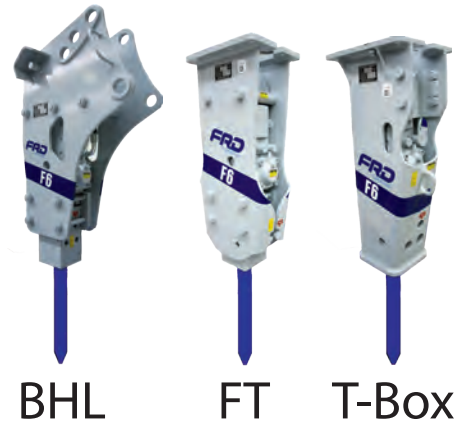
- Nitrogen charged back head for superior energy transfer
- Large diameter piston for increase in impact energy
- CD designed threads on through-bolt provide even load distribution and greater surface contact between the nut and bolt
- New front head design includes replaceable thrust bushing for added service life

F6/F9

		F6BHL	F6T-Box	F6FT
Operating weight, P&B	kg	365		
Operating weight, FT ¹⁾	kg			320
Operating weight, T-Box ¹⁾²⁾	kg		305	
Height with rod, pin and bush	mm	1450		
Height with rod, T-Box	mm		1400	
Height with rod, FT	mm			1413
Operating pressure	min MPa	10	10	10
	max	14	14	14
Oil flow	min l/min	50	50	50
	max	90	90	90
Impact rate (frequency)	min bpm	650	650	650
	max	1050	1050	1050
Rod diameter Ø	mm	75	75	75
Effective rod length	mm	450	450	450
Weight rod (standard)	kg	22	22	22
Hose inner dia Ø Press. Return	mm	12	12	12
Base machine weight	ton	3.5 - 10	5.5-6.5	5.5-6.5

¹⁾ Operating weight with top bracket. ²⁾ LN Silent Version = Sound and vibration damping

Specifications subject to change without notice



		F9
Operating weight, ¹⁾ T-Box ²⁾	kg	465
Height with rod, T-Box	mm	1595
Operating pressure	min MPa	12
	max	15
Oil flow	min l/min	65
	max	110
Impact rate	min bpm	550
	max	900
Rod diameter Ø	mm	90
Effective length rod	mm	500
Weight rod	kg	36
Hose inner dia Ø Press. Return	mm	19
Base machine weight	ton	6.5 - 9.0

¹⁾ Operating weight with top bracket. ²⁾ LN Silent Version = Sound and vibration damping

Specifications subject to change without notice.



TYPE OF JOBS



		Job	Specification	
Construction	● Optimal ● Suitable	Gardening & Landscaping	Fencing, Ground excavation, rock breaking	●
		Earthworks	Trenching, pit building, ground excavation	●
		Dredging	Canal deepening & extension Dock deepening & extension	●
		Dredging	Canal deepening & extension Dock deepening & extension	●
		Foundation	Foundation pile driving	●
		Tunnelling	Tunnel driving, Roof, face & rib scaling Floor levelling	●
Demolition & Renovation		Masonry structures	Brickwork, natural stone Autoclaved aerated concrete	●
		Concrete structures	Lightweight concrete, standard concrete Heavyweight concrete	●
		Pavements	Asphalt, concrete, composite surfaces	●
		Composite steel & concrete structures	Steel-reinforced concrete, prestressed concrete, fibre-reinforced concrete	●
Mining & Quarrying		Preliminary works	Overburden removal, bench, road & ramp levelling, 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	●
Metallurgical industry		Cleaning & debricking	Ladles, converter mouths, kilns	●
		Slag recycling	Boulder reduction in slag heap, removing blockages at crushing systems	●

Fxj SERIES

The next generation

FRD's newest line of hydraulic breakers for excavators represents the latest in design technology.

With multiple patented enhancements, the Fxj series improves day-to-day performance, offering less maintenance and downtime, smoother operation, superior strength and the highest level of reliability. A wider hydraulic flow range allows for use on a broad range of carriers reducing inventory while increasing utilization.



DURABLE & RELIABLE

INNOVATIVE THINKING



The introduction of the newly designed FRD hydraulic breaker is a world premiere. The Fxj is one of a kind in the market, thanks to the new mono-block design. With this new design there are no through bolts needed and it ensures more power and resistance.



Mono-block design

With the new design it eliminates a separate cylinder, fronthead and through-bolts.

NEW DESIGN

WHICH Fxj SUITS YOU?



Fxj SERIES



THE EXCLUSIVITY YOU NEED

GREAT BREAKING POWER

The use of high quality materials and the highest quality production process results in a breaker body with less weight and higher output/performance. The impact energy is higher than ever.

OPERATOR FRIENDLY

With the new slim design the Fxj has a better accesability in demolition and quarry. It provides high efficiency in trench work. In addition to its slim design, there is a newly designed top damper which reduces the noise and vibration.

IMPROVED DURABILITY

The use of the best quality materials and the highest quality standard in production creates a product that will work longer and is more efficient. The new floating rod seal, minimizes dust intake and result in an extended life time.

EASY SERVICE

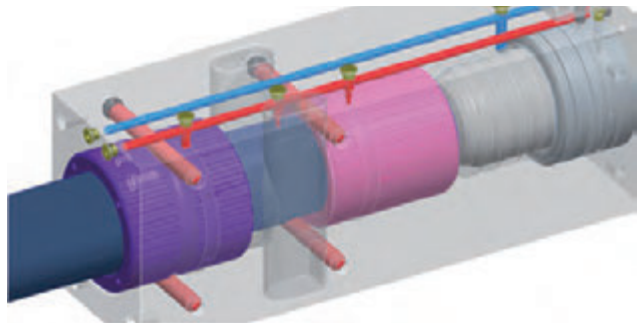
To ease the service FRD developed the mono-block cylinder which reduced the amount of parts. With this unique construction, there are no through bolts needed. With the new rod pin design and other improvements of the parts, the lifetime is longer and are easy to replace.

LOWEST LIFETIME COST

High quality materials give a longer lifetime to each part, which drastically reduces the total maintenance cost. Over long periods the advantages of less downtime and fewer parts to replace results in a cost per year, which are the lowest in the market.

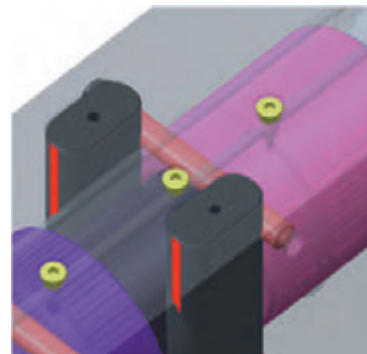


TECHNOLOGY THAT MAKES A DIFFERENCE



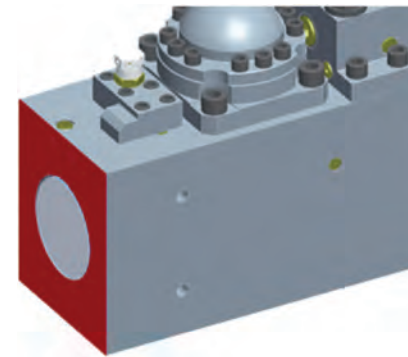
New greasing system

Advanced greasing system that evenly distributes grease to front holder, front bushing and rod pins



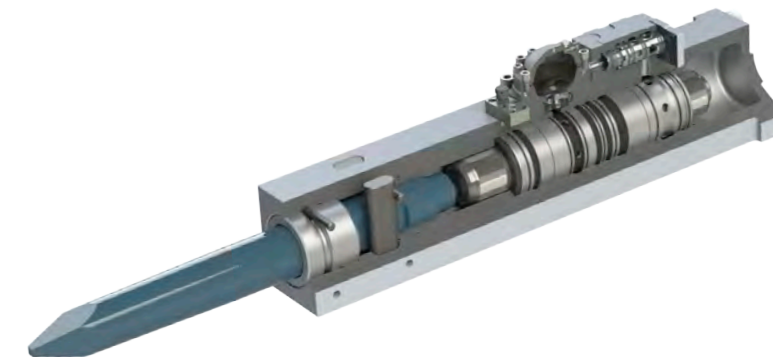
Newly developed rod-pin

Load is decreased by the long rod-pin, which enlarge the supporting area



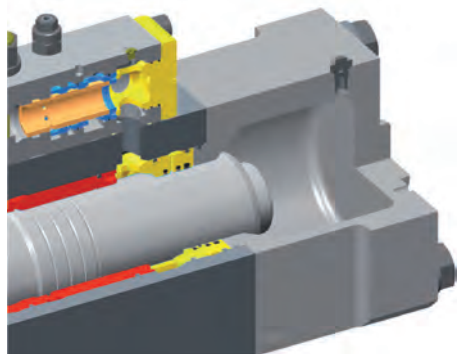
Slim body design

Rectangular body design for superior strength



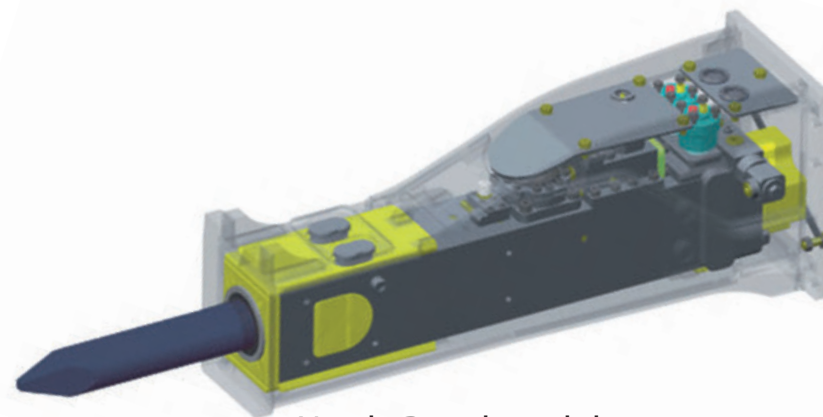
No through bolts

The removal of through bolts reduces maintenance and failure. It also ensures an increased power/weight ratio.



New valve design

Low resistance reduces hydraulic fluid temperatures which increases the efficiency



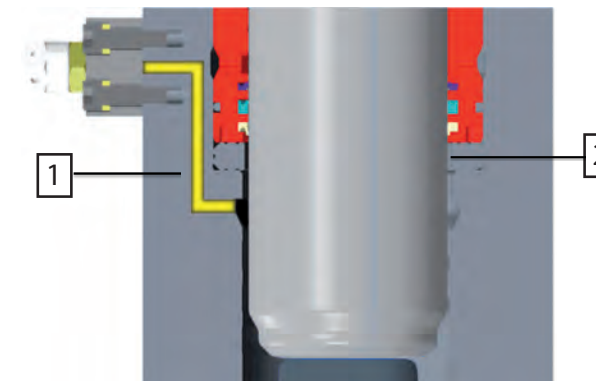
Newly Developed damper

Large volume top damper absorbs vertical movements and reduces the noise level



Redesigned piston

Increased contact area to the impact surface of the rod



Dust control system

2-Point Patent dust intake prevention system.

1. Clean air intake system
2. Replaceable Dust Wall

READY FOR THE TOUGHEST JOBS



Overburden removal, bench, road & ramp levelling



Boulder reduction in rock piles



Lightweight concrete, standard concrete



Tunnel driving, roof, face & rib scaling, floor levelling



Steel-reinforced concrete, pre-stressed concrete, fibre-reinforced concrete



Asphalt, concrete, composite surfaces



Trenching, pit building, ground excavation



Boulder reduction in slag heaps

Only with FRD special equipment

Roof clearing

Bench levelling

Removing encrustations

Breaking out ladles and molds

Underwater demolition, deepening shipping channels



Fxj125

Fxj175

Fxj225

Fxj275

MORE THAN JUST A BREAKER

The Fxj125 is the entry model in the Fxj series. A mid-range hammer designed for use on mini excavators, excavators and boom systems. The drivers are all impressed by the performance of the device. Standard integrated piston stroke adjustment prolongs or shortens the stroke and allows to customize the impact energy to the material to break. The monoblock design reduces components, wear and maintenance.



Specifications		Fxj125	
Operating weight, ¹⁾ Fxj	kg		740
Height with rod,	mm		2218
Operating pressure	min	MPa	16
	max		18
Oil flow	min	l/min	70
	max		120
Impact rate	min	bpm	400
	max		650
Rod diameter Ø	mm		110
Rod effective length	mm		680
Rod weight	kg		69
Hose inner dia Ø Press/ Return	mm		19
Sound power level	dB		125
Guaranteed sound power	dB		129
Base machine weight	ton		9 - 16

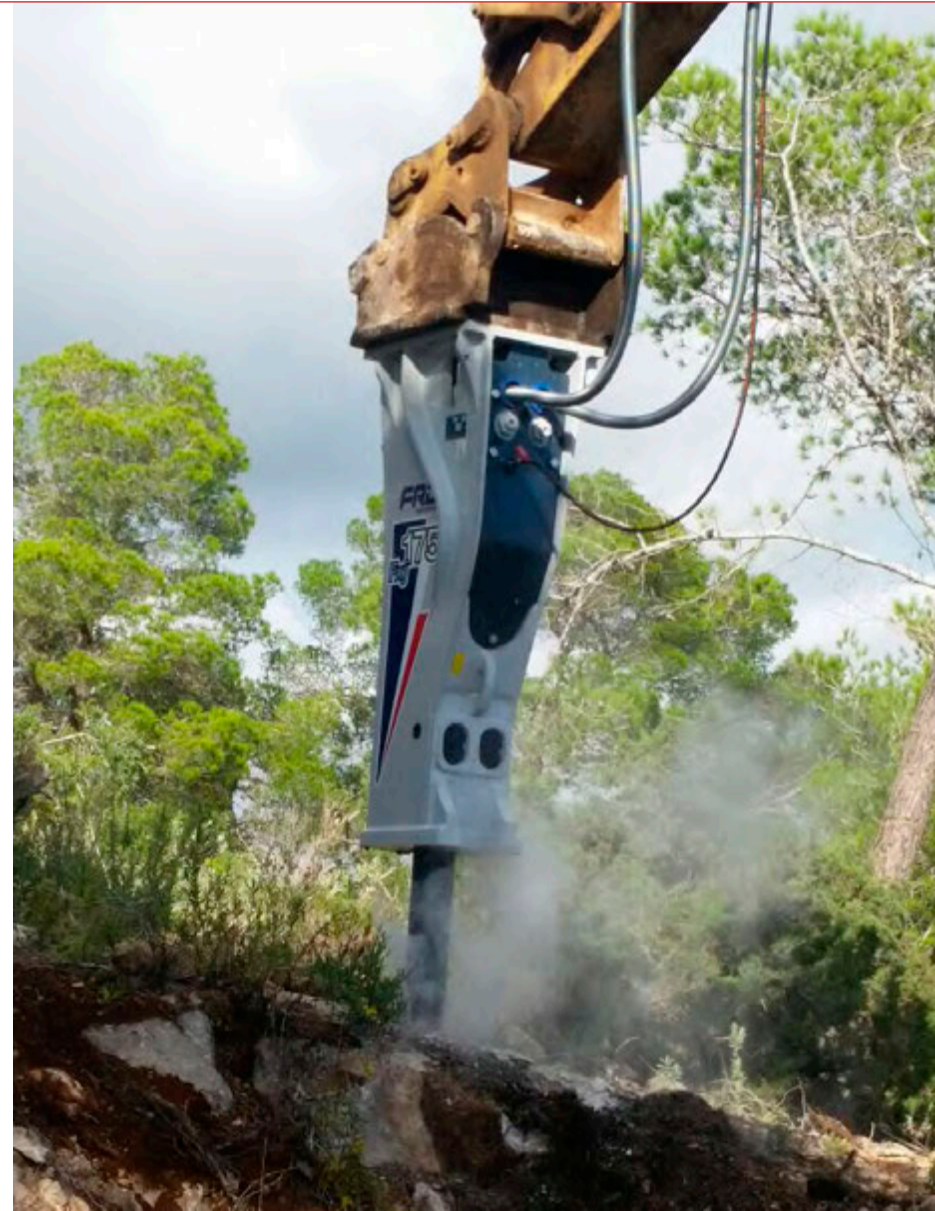
Specifications subject to change without notice

Fxj125

EXCAVATOR SIZE 9-16^T

ONE THOUSAND KILOGRAMS OF ENERGY

The Fxj175 is a mid-size hammer designed for use on excavators and pedestal booms. Operators appreciate performance features such as a stroke control, which lengthens or shortens the stroke and adapts the impact energy to the material being broken. Internal maintenance is greatly reduced due to the mono-block cylinder and less parts. All Fxj models are also designed to accommodate automatic grease systems for quick daily maintenance.



Specifications		Fxj175	
Operating weight, ¹⁾ Fxj	kg	955	
Height with rod,	mm	2288	
Operating pressure	min	MPa	16
	max		18
Oil flow	min	l/min	100
	max		160
Impact rate	min	bpm	450
	max		600
Rod diameter Ø	mm	120	
Rod effective length	mm	695	
Rod weight	kg	76	
Hose inner dia Ø Press/ Return	mm	19	
Sound power level	dB	118	
Guaranteed sound power	dB	120	
Base machine weight	ton	12 - 20	

Specifications subject to change without notice

THE PERFECT ADJUSTMENT

The Fxj225 is designed for excavators in the 18 to 25 ton range. The slim-design increases the efficiency in trench and channel works. Noise and vibrations are reduced by the newly designed dampening system.

The production quality combined with the new monoblock construction, the newly designed rod retaining pins and FRD spare parts from Japan guarantees a longer life time of the individual components, which greatly reduces the overall maintenance costs.

Of course, the Fxj225 offers the already well known and appreciated advantages of the Fxj range: anti-idle blow, adjustable piston stroke, connection for central greasing system (FRD Sencio Lubrico), connection for under water operation, dust intake prevention. All of this is standard.



Specifications		Fxj225	
Operating weight, ¹⁾ Fxj	kg		1585
Height with rod,	mm		2739
Operating pressure	min	MPa	16
	max		18
Oil flow	min	l/min	125
	max		190
Impact rate	min	bpm	350
	max		550
Rod diameter Ø	mm		135
Rod effective length	mm		737
Rod weight	kg		120
Hose inner dia Ø Press/ Return	mm		25
Sound power level	dB		117
Guaranteed sound power	dB		120
Base machine weight	ton		18 - 25

Specifications subject to change without notice

IN THE CENTRE OF ATTENTION

The Fxj275 will cover a wide range of excavators and leaves its competitors behind. With the slim body design there will be no job that is too demanding. The Fxj is at home, performing with reliable ease on a daily basis. All the features of the Fxj series are present in this breaker; nono-block design, dust control system, newly developed rod-pin, redesigned piston and a redesigned valve with higher resistance.



Specifications		Fxj275	
Operating weight, ¹⁾ Fxj	kg		1708
Height with rod,	mm		2796
Operating pressure	min	MPa	16
	max		18
Oil flow	min	l/min	145
	max		220
Impact rate	min	bpm	350
	max		550
Rod diameter Ø	mm		140
Rod effective length	mm		770
Rod weight	kg		135
Hose inner dia Ø Press/ Return	mm		25
Sound power level	dB		121
Guaranteed sound power	dB		122
Base machine weight	ton		21 - 29

¹⁾ Operating weight with top bracket. FXJ Silent Version = Sound and vibration damping

Specifications subject to change without notice

Fxj275

EXCAVATOR SIZE 21-29^T

WHEN THINGS BECOME SERIOUS

Designed for excavators in the 26 to 39 ton range, the Fxj375 is a hard hitting breaker that has no rivals. With years of research behind each hammer, it's no surprise the Fxj outperforms the competition. It starts from the inside out with a patented mono-block cylinder. We don't stop there, a larger piston diameter and increased back head pressure improves the breaker impact performance. An optional hi-lo speed control actuated from the cab matches the breaker and excavator to the application.



Specifications		Fxj375	
Operating weight, ¹⁾ Fxj	kg		2449
Height with rod,	mm		3155
Operating pressure	min	MPa	16
	max		18
Oil flow	min	l/min	170
	max		260
Impact rate	min	bpm	300
	max		450
Rod diameter Ø	mm		155
Rod effective length	mm		810
Rod weight	kg		172
Hose inner dia Ø Press/ Return	mm		25
Sound power level	dB		121
Guaranteed sound power	dB		123
Base machine weight	ton		26 - 39

¹⁾ Operating weight with top bracket. FXJ Silent Version = Sound and vibration damping

Specifications subject to change without notice

Fxj375

EXCAVATOR SIZE 26-39^T

A PIECE OF HIGH-TECH ELEGANCE

Excavators in the 35-55 ton class are the perfect match for this demolition machine. Whether you're breaking blue granite in Scandinavia or reducing oversize bolders in Spain, the Fxj475 performs its job quietly and with ease. The unique one-piece enclosure and damper system reduces noise levels for use in noise sensitive environments. A higher back head pressure and larger piston diameter increases impact performance. Greasing has been made easy with a unique lubrication system for the front section and front bushings which improves the service and lifetime of the rod.



Specifications		Fxj475	
Operating weight, ¹⁾ Fxj	kg		3100
Height with rod,	mm		3372
Operating pressure	min	MPa	16
	max		18
Oil flow	min	l/min	200
	max		300
Impact rate	min	bpm	250
	max		350
Rod diameter Ø	mm		170
Rod effective length	mm		830
Rod weight	kg		221
Hose inner dia Ø Press/ Return	mm		32
Sound power level	dB		121
Guaranteed sound power	dB		124
Base machine weight	ton		35 - 55

¹⁾ Operating weight with top bracket. FXJ Silent Version = Sound and vibration damping

Specifications subject to change without notice

Fxj475

EXCAVATOR SIZE 35-55^T

POWER AND CONTROL

The Fxj770 is designed for excavators in the 44 to 75 ton range. With the slim-design, the Fxj770 is ideal to use at demolition sites, or as a production breaker at the quarry. The slim-design also increases the efficiency in trench and channel works. Noise and vibrations are reduced by the newly designed dampening system. The production quality combined with the new monoblock construction, the newly designed rod retaining pins and FRD spare parts from Japan guarantees a longer life time of the individual components, which greatly reduces the overall maintenance costs.

Of course, the Fxj770 offers the already well known and appreciated advantages of the previous range: anti-idle blow, adjustable piston stroke, connection for central greasing system (FRD Sencio Lubrico), connection for under water operation, dust intake prevention. All of this is standard.



Specifications		Fxj770	
Operating weight, ¹⁾ Fxj	kg		4790
Height with rod,	mm		3965
Operating pressure	min	MPa	16
	max		18
Oil flow	min	l/min	250
	max		340
Impact rate	min	bpm	250
	max		330
Rod diameter Ø	mm		190
Rod effective length	mm		860
Rod weight	kg		315
Hose inner dia Ø Press/ Return	mm		32
Sound power level	dB		121
Guaranteed sound power	dB		124
Base machine weight	ton		44 - 75

¹⁾ Operating weight with top bracket. FXJ Silent Version = Sound and vibration damping

Specifications subject to change without notice

Fxj770

EXCAVATOR SIZE 44-75^T

READY FOR THE TOUGHEST JOBS



Primary rock breaking



Secondary breaking



Tunnel driving, Roof, Face & Rib scaling, Floor levelling



Canal deepening & extension



Ground levelling



Steel-reinforced concrete, pre-stressed concrete, fibre-reinforced concrete



Asphalt, concrete, composite surfaces



Trenching, pit building, ground excavation



Dock deepening & extension



Foundation pile driving

IT'S THE SIZE THAT MATTERS



Specifications			Fxj125	Fxj175	Fxj225	Fxj275	Fxj375	Fxj475	Fxj770
Operating weight, ¹⁾ Fxj	kg		740	955	1585	1708	2449	3100	4790
Height with rod	mm		2218	2288	2739	2796	3155	3372	3965
Operating pressure	min	MPa	16	16	16	16	16	16	16
	max		18	18	18	18	18	18	18
Oil flow	min	l/min	70	100	125	145	170	200	250
	max		120	160	190	220	260	300	340
Impact rate	min	bpm	400	450	350	350	300	250	250
	max		650	600	550	550	450	350	330
Rod diameter Ø	mm		110	120	135	140	155	170	190
Rod effective length	mm		680	695	737	770	810	830	860
Rod weight	kg		69	76	120	135	172	221	315
Hose inner dia Ø	mm		19	19	25	25	25	32	32
Press/Return									
Sound power level	dB		125	118	117	121	121	121	121
Guaranteed sound power level	dB		129	120	120	122	123	124	124
Base machine weight	ton		9 - 16	12 - 20	18 - 25	21 - 29	26 - 39	35 - 55	44 - 75

¹⁾ Operating weight with top bracket.

Specifications subject to change without notice

COMPARISON



Experience and Credibility with customer in the world



Furukawa breakers develop remarkable power, designed for heavy duty excavation. Our breaker's response to the operator's sensitivity is matched only by its crushing strength. This is the Furukawa design concept adopted from years of experience.



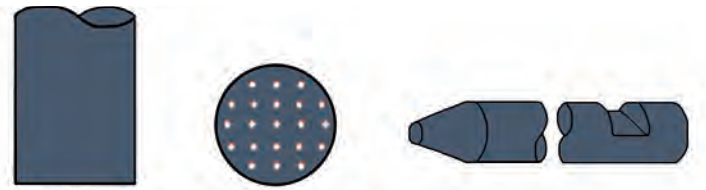
Specifications		HB20G PLUS	
Body weight	kg		835
Operating weight with Side plate ^(*)	kg		1760
Operating height ^(*)	mm		2718
Operating width ^(*)	mm		500
Impact rate	min	min ⁻¹	350
	max		850
Operating oil flow rate	min	l/min	125
	max		200
Operating oil pressure	min	MPa	15
	max		18
Rod diameter	mm		135
Hose diameter	mm		25
Weight of base machine	ton		19 - 22

*1: Including Top Bracket

FRD Furukawa reserves right to change specifications without prior notice.

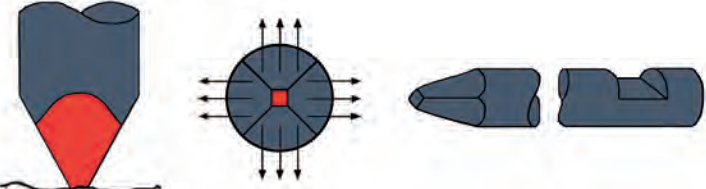
HB20G PLUS

Flat rod



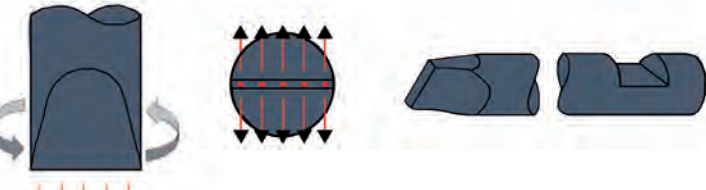
Secondary breaking in quarries, boulder breaking, concrete breaking, and slab breaking

Moil point



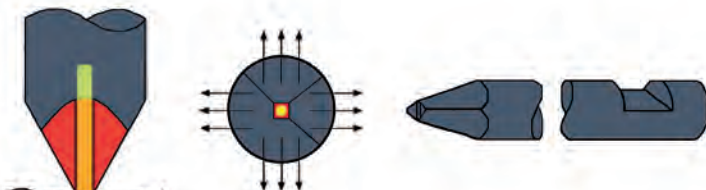
Multipurpose applications, including breaking of extra hard rock, hard rock, hard stone, and reinforced concrete, as well as excavation of bedrock

Wedge point



Concrete breaking, excavation of bedrock, operations on the face of slopes, excavation of ditches, etc.

Core rod
(Ball Point Rod)



Breaking metal ores, as well as quartzite and other highly abrasive objects

Asphalt

Parking, roads

soft structures

Wedge point / spade rod

Concrete

Thin floors, walls

Reinforced

Wedge point

not reinforced

Moil point

Thick floors, walls

Reinforced

Wedge point

not reinforced

Moil point

Foundations

Reinforced

Wedge point

not reinforced

Moil point

Recycling

Flat rod

Sedimentary rock
(limestone, sandstone, grey wacke, calcareous sediment)

Trenching, foundation work, primary quarry breaking

heavily fissured

Wedge point

lightly fissured

Moil point

monolithic

Moil point

Breaking oversized

Wedge point

Crystalline rock
(magma, greenstone, gabbro, granite etc.)

Trenching, foundation work, primary quarry breaking

heavily fissured

Wedge point

lightly fissured

Flat rod

monolithic

Flat rod

Breaking oversized

Flat rod



LOCAL SERVICE AND SUPPORT

FRD seeks firstly to supply a product of undoubted integrity. Then back this up with a support network of dedicated Distributors to ensure whatever support, wherever and whenever needed. The FRD-Distributor combination has been made unbeatable.

FRD Distributors have been selected for their professional competence, their market coverage, their dedication to quality and their willingness to work. They receive intense training on all machines and systems and every support that a committed manufacturer can give them. They actively exchange experience between each other to ensure their clients get the latest lessons from the market. They are a skilled and fast team of professionals.

VALUE FOR MONEY

Buying FRD products is a smart investment. A reasonable price for top quality, long lifetime, low maintenance and low breakdown time products in the long term makes financially good sense.

Next steps? FRD and its Distributors have a vast resource of information beyond what can be mentioned here.



WHERE EXPERIENCE COUNTS



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WHERE EXPERIENCE COUNTS