









# Hydraulic hammers

HP Series

# Application areas

		L	M	S	
 Mining and Quarry	Preliminary works	<ul style="list-style-type: none"><li>• Overburden removal</li><li>• Bench, road &amp; ramp leveling</li><li>• Roof, face &amp; rib scaling</li></ul>	<input type="radio"/>	<input type="radio"/>	
	Secondary demolition	<ul style="list-style-type: none"><li>• Boulder reduction in rock pile</li><li>• Removing blockages at crushing systems</li></ul>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Primary rock breaking	<ul style="list-style-type: none"><li>• Selective rock breaking</li><li>• Blastfree mining</li></ul>	<input type="radio"/>	<input type="radio"/>	
	Light Demolition	<ul style="list-style-type: none"><li>• Demolition of masonry structures</li><li>• Brickwork</li><li>• Natural stone</li><li>• Renovation of interiors</li><li>• Autoclaved aerated concrete</li></ul>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Demolition of non-reinforced concrete structures	<ul style="list-style-type: none"><li>• Primary demolition of lightweight and standard concrete</li><li>• Primary demolition of heavyweight concrete</li><li>• Wall Elements</li><li>• Secondary demolition</li></ul>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
 Demolition & renovation	Composite steel & concrete structure demolition	<ul style="list-style-type: none"><li>• Primary demolition of lightweight and standard reinforced concrete</li><li>• Primary demolition of heavyweight steel - reinforced concrete</li><li>• Secondary Demolition floors, slabs and beams</li><li>• Separating rebars from pillars and struts</li><li>• Fiber-reinforced concrete</li><li>• Cutting rebars and steel reinforcements</li></ul>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Demolition of metallic buildings and structures	<ul style="list-style-type: none"><li>• Demolition of refineries</li><li>• Cutting of Metal and steel structures</li><li>• Cutting steel girders/beams</li><li>• Cutting reinforcements</li></ul>			
	Sorting and Loading	<ul style="list-style-type: none"><li>• Sorting</li><li>• Loading</li><li>• Waste handling</li><li>• Site clean-up</li></ul>			
	Pavement demolition	<ul style="list-style-type: none"><li>• Asphalt</li><li>• Concrete</li><li>• Composite surfaces</li></ul>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Earth moving works	<ul style="list-style-type: none"><li>• Trenching</li><li>• Ground excavation</li><li>• Floor leveling</li><li>• Soil compaction</li><li>• Trench compaction</li><li>• Loading soil or bulk material</li></ul>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Foundation works	<ul style="list-style-type: none"><li>• Building foundation excavation</li><li>• Ground leveling</li></ul>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Building construction	<ul style="list-style-type: none"><li>• Foundation pile driving</li><li>• Compaction around pillars</li></ul>		<input type="radio"/>	<input type="radio"/>
 Earth Moving and Construction					

		L	M	S	
 Infrastructures	Tunnelling	<ul style="list-style-type: none"><li>• Tunnel excavation</li><li>• Roof, face &amp; rib scaling</li></ul>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Underwater application	<ul style="list-style-type: none"><li>• Dredging</li><li>• Dock deepening &amp; extension</li><li>• Canal deepening &amp; extension</li><li>• Loading soil or bulk material</li><li>• Handling rock or breakwaters</li></ul>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Trenching	<ul style="list-style-type: none"><li>• Oil &amp; gas, water &amp; sewage (deep trenching)</li><li>• Trenching</li><li>• Trench soil compaction</li></ul>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Road construction	<ul style="list-style-type: none"><li>• Pile driving and guard rail driving</li><li>• Asphalt repair</li><li>• Maintenance work (driveways, sidewalks and parking lots)</li><li>• Block paving</li></ul>		<input type="radio"/>	<input type="radio"/>
	Slag recycling	<ul style="list-style-type: none"><li>• Boulder reduction in slag heaps</li><li>• Removing blockages at crushing systems</li></ul>	<input type="radio"/>	<input type="radio"/>	
	Cleaning & debricking	<ul style="list-style-type: none"><li>• Ladles</li><li>• Converter mouths</li><li>• Kilns</li></ul>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Gardening & Landscaping	<ul style="list-style-type: none"><li>• Fencing</li><li>• Ground excavation</li><li>• Rock breaking</li><li>• Pit planting</li><li>• Stump splitting</li><li>• Golf course maintenance</li><li>• Root and stump grinding</li><li>• Hedgerow clearance and rejuvenation</li><li>• Grinding of logging residues</li></ul>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Forestry	<ul style="list-style-type: none"><li>• Timber log handling</li><li>• Maintenance of green area, small trees and brush</li><li>• Creation and upkeep of woodland corridors and firebreaks</li><li>• Tree clearing</li><li>• Vegetation clearing</li><li>• Branch clearing</li></ul>			
 Metallurgical industry					
 Agriculture and Forestry					

L| large hammers

M| medium hammers

S| mini hammers



# Hydraulic hammers

## Indeco HP

Indeco HP hydraulic hammers are an outstanding expression of Italian high-tech and construction quality applied to demolition. In-depth research into hydraulic systems, materials, heat treatment and accessories have enabled Indeco to establish a reputation on markets throughout the world for product excellence.

With its many different models, divided into large, medium and mini and available in various versions, Indeco has the widest range of hammers available anywhere in the world. This provides end-users with a huge choice, ensuring that they can find the ideal hammer/excavator match.

### mini hammers

Despite their compact size, Indeco's range of mini hammers are exceptionally reliable, quiet and efficient, and best suited for such jobs as excavations work, highway maintenance, demolitions and recycling in city areas and building refurbishment. Their versatility makes them extremely efficient in specialist jobs such as maintenance in iron foundries.

### medium hammers

Their excellent weight/power ratio and their slimline structure make the mid-range Indeco hammers the ideal choice for classical applications, such as demolishing buildings, earthworks in inhabited areas and secondary demolitions in quarries, as well as for more specific tasks. In fact, mid-range hammers are used for underwater work (using a special kit) as well as for digging narrow deep trenches and removing casting slag from blast furnaces.

### large hammers

Combining maximum power with the effectiveness of intelligent technology, Indeco's larger hammers are unbeatable when it comes to completing the toughest jobs in the shortest possible time-frame – whether it's the biggest demolition jobs, primary breaking in quarries, digging foundations, or excavating huge rail and road tunnels.





# Features of Indeco hammers

All Indeco hammers have a special intelligent hydraulic system [1], enabling them to automatically vary the energy and frequency of the blows according to the hardness of the material being demolished.

This optimises the hydraulic pressure delivered by the machine, thus improving productivity and enhancing the overall performance.

Exclusive features such as the synchronised internal distributor [2] aligned with the piston, the oil cushions [3] for vibration dampening and the short hydraulic flow pattern [4] make it possible to completely do away with seals in the distribution area, a decisive factor in extending the working life of the hammer and significantly reducing downtimes.

The use of special low-alloy steels, exclusively manufactured according to Indeco's own formula greatly lengthen the average working life of the major hammer components.

The housing [5] is made out of extra-strength HARDOX® steel wear plates, which eliminate buckling.

The piston [6] is divided into two parts, for greater impact energy and lower operating costs.

The centralised greasing system [7] enables the sliding parts to remain lubricated even when the hammer is operating horizontally, thus considerably reducing wear and tear on components and extending product lifetime.

The "quick change" interchangeable bushing [8] is available in various materials for different jobs; it is inserted into the lower tool bushing where the tool moves, and reduces maintenance times and costs, by cutting out the long machine downtimes needed to replace the traditional fixed bushing.

All carriers which mount Indeco hammers benefit from the Indeco dual shock-absorption system [9]: an internal hydraulic one and a mechanical one, located outside the body, which substantially reduce the vibrations transmitted to the excavator. The excavator boom is also subject to lower stress levels,

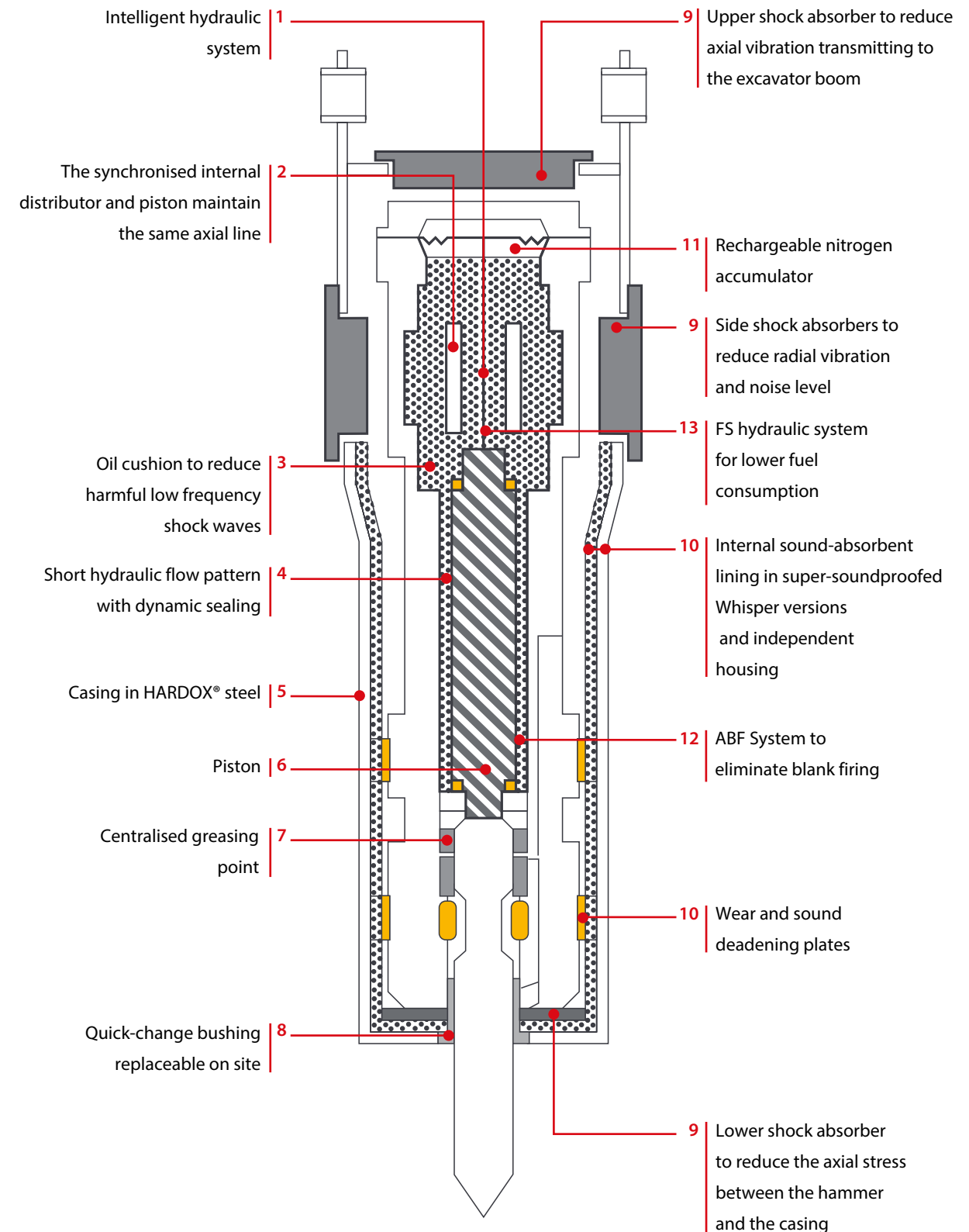
as Indeco hammers are considerably lighter under working conditions than rival makes in the same class. Alongside the standard versions there is also a super-soundproofed Whisper version, whose body is lined internally with sound-absorbent material [10] and an "anti-rumble" paint, which – combined with a few modifications to the bushing – enable noise emission levels to be considerably reduced. By lowering pressure peaks, the rechargeable hydraulic/nitrogen accumulator [11] also reduces stress in the excavator hydraulic circuit, keeps the gas charge and energy per blow constant, and reduces maintenance and operating costs.



The ABF (Anti Blank Firing) system [12], installed as standard on all of the medium- and large-range Indeco hammers, cuts out blank fire by eliminating any down pressure from the hammer whenever the tool is not resting firmly on the surface to be demolished. This increases the service life of all components subject to wear and tear, as well as reducing stress to the hammer body and excavator arm.



As well as being efficient and reliable, Indeco hydraulic hammers are now proving to be even more environmentally-friendly and low on fuel consumption. With a now even more efficient hydraulic system [13], the HP series has now also become FS (Fuel Saving). Compared to other manufacturers' models of equivalent weight and performance, Indeco hammers require less oil per minute and lower operating pressure. And as using lower hydraulic power means reducing the number of revolutions per minute on the carrier, they lead to fuel savings of up to 20%, while ensuring optimum performance and maximum productivity. This becomes even more evident when comparing the Indeco hammer with gas or gas/oil powered products of similar size manufactured by competitors.



# Mini hammer range

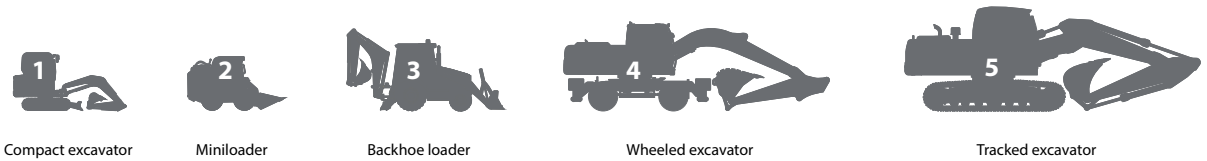
## HP series

These excellent jobsite companions are the most numerous class of models in the Indeco range.



Technical Data	HP 100 FS		HP 150 FS / HP 150 FS Heavy Duty		HP 200 FS		HP 350 FS		
Type of carrier	1	2	1	2	1	2	1	2	3
Excavator weight (possible)	0,5 ÷ 2 tons		0,7 ÷ 3 tons		1,4 ÷ 5 tons		1,7 ÷ 6,5 tons		
Weight of hammer when operated	59 Kg		80 / 98 Kg (Heavy Duty)		160 Kg		230 Kg		
Steel diameter	42 mm		45 mm		48 mm		56 mm		
Pressure adjusted to the excavator	160 bars		160 bars		160 bars		160 bars		
Back pressure max	16 bars		11 bars		11 bars		12 bars		
Energy class per blow	160 joule		230 joule		300 joule		500 joule		
Number of blows per minute	400 ÷ 1900 n/min		540 ÷ 2040 n/min		700 ÷ 1800 n/min		540 ÷ 1540 n/min		

Carrier key



HP 500 FS			HP 600 FS			HP 700 FS		HP 900 FS	
1	2	3	1	2	3	1	3	1	3
3 ÷ 8 tons			3,5 ÷ 10,5 tons			4 ÷ 12 tons		5 ÷ 14 tons	
320 Kg			390 Kg			440 Kg		550 Kg	
65 mm			75 mm			80 mm		90 mm	
160 bars			170 bars			170 bars		170 bars	
12 bars			11 bars			12 bars		11 bars	
700 joule			850 joule			950 joule		1200 joule	
780 ÷ 1620 n/min			600 ÷ 1340 n/min			620 ÷ 1500 n/min		570 ÷ 1180 n/min	

For data on the pressure adjusted to the hammer and on oil flow, please consult the “Parameters for selecting and adjusting the hammer” page.

N.B. All illustrations and numerical data in this catalog are purely indicative and subject to change at our discretion and without notice. We therefore reserve the right to modify them with a view to improving and continuously developing our product.

# Medium hammer range

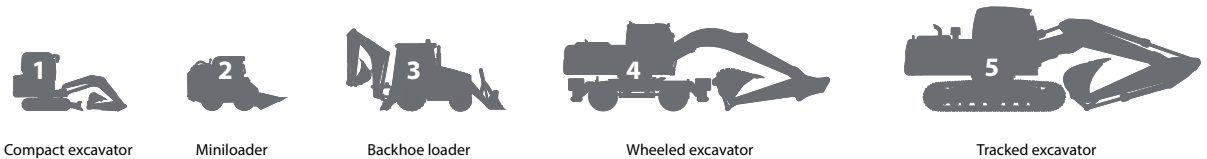
## HP series

A perfect blend of power and agility characterises the mid range Indeco hammers, tireless partners even on the toughest of jobs.



Technical Data	HP 1200 FS	HP 1500 FS	HP 1800 FS
Type of carrier	1 3 4	4 5	4 5
Excavator weight (possible)	6,5 ÷ 16 tons	10 ÷ 20 tons	12 ÷ 22 tons
Weight of hammer when operated	650 Kg	850 Kg	1000 Kg
Steel diameter	90 mm	110 mm	115 mm
Pressure adjusted to the excavator	170 bars	180 bars	180 bars
Back pressure max	8,5 bars	10 bars	8 bars
Energy class per blow	1500 joule	1750 joule	2000 joule
Number of blows per minute	450 ÷ 980 n/min	420 ÷ 1000 n/min	440 ÷ 1060 n/min

Carrier key



HP 2000 FS	HP 2500 FS	HP 2750 FS	HP 3000 FS
4 5	4 5	5	5
15 ÷ 25 tons	16 ÷ 28 tons	16 ÷ 30 tons	19 ÷ 32 tons
1200 Kg	1500 Kg	1690 Kg	1900 Kg
120 mm	130 mm	135 mm	140 mm
180 bars	180 bars	190 bars	200 bars
8 bars	7 bars	7 bars	8 bars
2500 joule	3400 joule	3700 joule	4400 joule
460 ÷ 940 n/min	400 ÷ 870 n/min	400 ÷ 870 n/min	360 ÷ 870 n/min

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# Large hammer range

## HP series

This is the most prestigious class, containing the top range of Indeco hammers. They are top hammers not only in terms of size, but also in their outstanding performance.



Technical Data	HP 3500 FS	HP 4000 FS	HP 5000 FS	HP 7000 FS
Type of carrier	5	5	5	5
Excavator weight (possible)	21 ÷ 38 tons	23 ÷ 42 tons	27 ÷ 50 tons	32 ÷ 63 tons
Weight of hammer when operated	2200 Kg	2500 Kg	3150 Kg	4000 Kg
Steel diameter	145 mm	150 mm	160 mm	180 mm
Pressure adjusted to the excavator	210 bars	210 bars	210 bars	210 bars
Back pressure max	7 bars	8 bars	7 bars	8,5 bars
Energy class per blow	5200 joule	6200 joule	8000 joule	10500 joule
Number of blows per minute	370 ÷ 760 n/min	340 ÷ 820 n/min	300 ÷ 670 n/min	320 ÷ 580 n/min

Carrier key



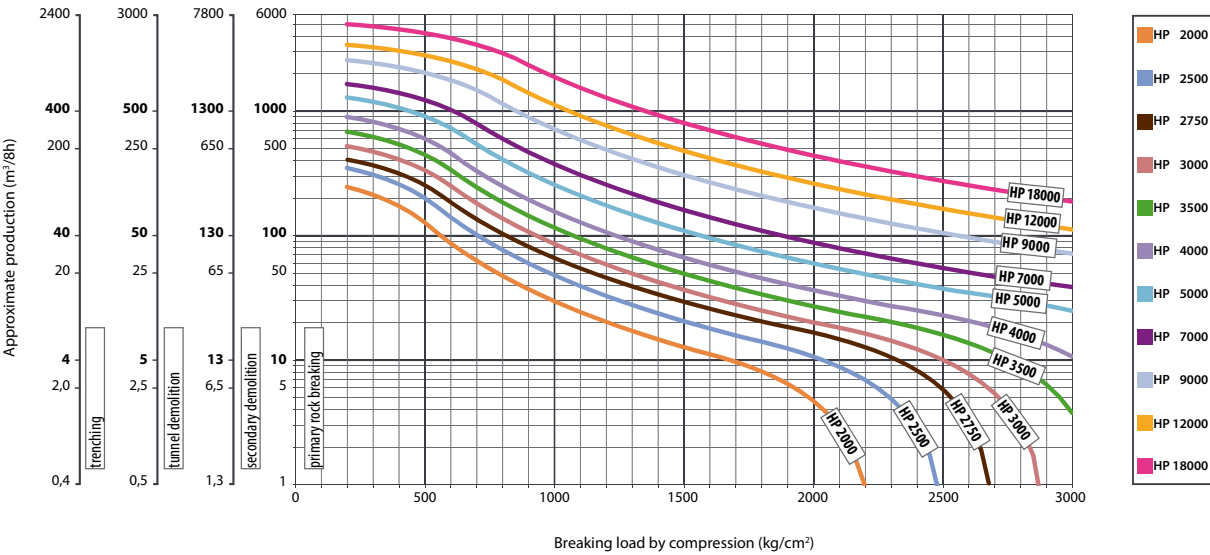
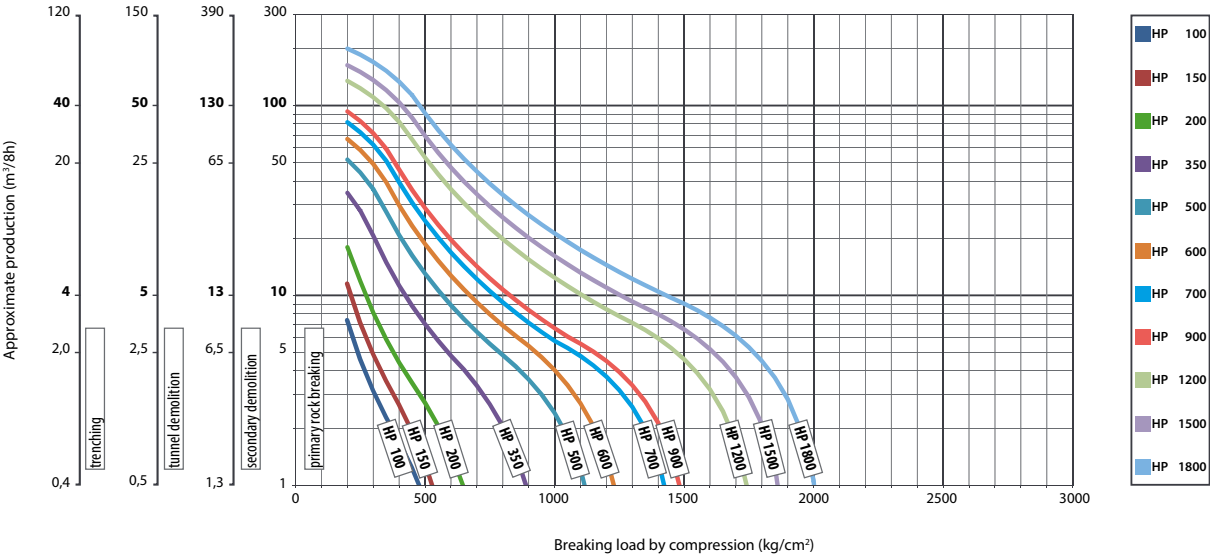
HP 9000 FS	HP 12000 FS	HP 18000 FS
5	5	5
39 ÷ 80 tons	45 ÷ 120 tons	60 ÷ 140 tons
5000 Kg	7800 Kg	11050 Kg
195 mm	215 mm	250 mm
210 bars	230 bars	230 bars
8 bars	9 bars	11 bars
15000 joule	20000 joule	25000 joule
270 ÷ 540 n/min	240 ÷ 550 n/min	240 ÷ 460 n/min

For data on the pressure adjusted to the hammer and on oil flow, please consult the “Parameters for selecting and adjusting the hammer” page.

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# Productivity

## Parameters for selecting and adjusting the hammer



N.B. These nominal values are for reference purposes and are not binding

## Noise levels

Noise levels measured\* at various distances

Distance	10 m	15 m	20 m	25 m	30 m
HP model	96	92,5	90	88,1	86,5
HP Whisper model	93	89,5	87	85,1	83,5

Guaranteed noise level\* corresponding to EU Directive 2006/42/EC

HP model	126
HP Whisper model	123

\*values expressed in dB (A)

Model	Compatibility hammer/carrier (tons)*	Oil pressure adjustment (bars)/ oil flow (l/min)**
HP 100	0,5 2 0,7 1,8	105 115 120 125 28 20 15 10
HP 150	0,7 3 0,8 2,5	105 115 120 125 40 30 20 15
HP 200	1,4 5 2 4	105 115 120 125 45 35 25 25
HP 350	1,7 6,5 2,5 5	105 115 120 125 60 45 35 30
HP 500	3 8 3,5 6,5	105 115 120 125 80 70 60 50
HP 600	3,5 10,5 4 8,5	105 120 125 130 80 70 60 50
HP 700	4 12 5,5 10	105 120 125 130 90 80 70 60
HP 900	5 14 6 12	105 120 125 130 100 90 80 70
HP 1200	6,5 16 8 13	105 120 125 130 105 95 85 70
HP 1500	10 20 12 17	115 120 125 140 125 110 100 80
HP 1800	12 22 14 20	115 120 125 140 130 120 110 85

Model	Compatibility hammer/carrier (tons)*	Oil pressure adjustment (bars)/ oil flow (l/min)**
HP 2000	15 25 18 22	115 125 130 140 150 135 125 110
HP 2500	16 28 19 24	115 125 130 140 160 140 130 125
HP 2750	16 30 20 26	120 130 135 145 160 145 135 130
HP 3000	19 32 21 28	125 135 140 150 180 170 160 145
HP 3500	21 38 24 30	130 135 140 160 200 185 175 160
HP 4000	23 42 26 33	130 140 145 160 230 215 205 180
HP 5000	27 50 30 40	130 140 145 160 265 230 220 190
HP 7000	32 63 36 52	140 145 150 165 305 285 275 250
HP 9000	39 80 46 68	140 150 155 165 355 325 315 290
HP 12000	45 120 58 90	140 160 165 180 420 380 370 325
HP 18000	60 140 75 120	140 160 170 180 520 470 460 420

\*Suggested uses on machines with an overall weight (in tons):

Best Possible (match subject to approval by the Indeco dealer)

\*\*Pressure adjusted to the hammer (bars) relative to oil flow (l/min):

Optimum pressure adjusted to the hammer (in bars) Optimal oil supply (l/min) Possible pressure/oil



# Accessories

## IDA (Indeco Dust Abatement) System

An innovative system that is particularly effective for reducing wear and tear on components, and for extending the working life of the hammer. It is made up of an air compressor and a high-pressure water pump, mounted onto the excavator and driven by two hydraulic motors powered by the excavator. A set of electrohydraulic valves enable the excavator operator to activate the pump and compressor independently, thus starting up either one or both of the protection devices:

- **Dust Abatement Kit**

A jet of high-pressure water spray, emitted by three nozzles **|1|** connected with the outer casing of the hammer, prevents dust from damaging both the tool and the operator.

- **Dust shield for tunnelling work and underwater applications**

The internal pressurization of the hammer **|2|** prevents dust, water and debris from getting into the hammer through the bushing, as happens during tunnel demolitions and underwater excavations.

## Anti-Grease and Anti-Dust System

This system, which is crucial when working in dusty environments and when tunnelling, is made up of two collars, which are both adherent to the tool **|3|** prevent dust from getting in and grease from getting out, improving lubrication levels and thus lengthening the working life of the main hammer components.

## Indeco Lub System Kit

This system has a dual function - to optimise grease consumption and to make it unnecessary for the operator to stop work to grease the moving parts. The kit includes a pumping unit pack **|4|**, tubing and connections **|5|** to the hammer.

**1 |**



**2 |**



**3 |**



**4 |**



**5 |**



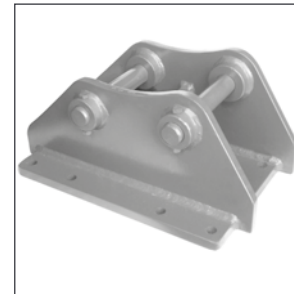
**| 6**



**| 7**



**| 8**



**| 9**



**| 10**



The grease point is centralised and feeds all of the bushings and the moving parts at the tool, inside the hammer and on the retaining axle. To make it easier for rental organisations, this system which is usually placed in the carrier, can also be completely mounted onto the hammer.

## Special Indeco Sirio lubricant

It is vital that a specific lubricant be used, to ensure the durability of the main components of the hammer. Indeco's **|6|** Sirio HBS grease, with solid additives is particularly resistant to oxidation, can withstand extreme pressures and temperatures and shows excellent adhesion and water-resistance.

## Pins and bushings

**|7|** Designed to make it easier to mount all Indeco products onto the excavator boom, with or without a mounting bracket.

## Mounting brackets

Each Indeco mounting bracket model **|8|** can be used with all Indeco products in the same class.

## Folding mounting bracket

A special mounting bracket **|9|** for folding the hammer away directly under the carrier boom.

## Connecting hoses

We recommend using original Indeco high- and low-pressure hoses **|10|** to connect various tools to the hydraulic system on the carrier.



# The tools

## Chisel tool

Suitable for all earthworking or narrow-section excavation jobs on medium to hard stratified rock.



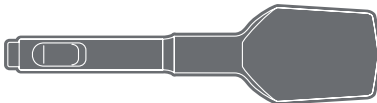
## Moil point tool

Suitable for breaking up concrete, or medium-hard non-stratified rock. Secondary demolition: average, hard or extremely hard blocks.



## Asphalt cutter

Suitable for cutting asphalt, breaking up flooring, as well as brick or sandstone walls.



## Pile driver

Suitable for pilework or press-moulded supports for guardrails, etc.



## Pyramidal point

Suitable for demolishing hard reinforced concrete flooring, as well as as sedimentary material.



## Cobra chisel tool

Suitable for all types of excavation work on medium-hard to hard rock, non-stratified rock or rock which tends to pulverise when being broken up, puddingstones.



## Blunt tool

Suitable for breaking up blocks of any hardness, or to reduce the size of rubble.



The full range of Indeco hammers

Hammer		Weight	
HP	100	59	Kg
HP	150	80	Kg
HP	150 Heavy Duty	98	Kg
HP	200	160	Kg
HP	350	230	Kg
HP	500	320	Kg
HP	600	390	Kg
HP	700	440	Kg
HP	900	550	Kg
HP	1200	650	Kg
HP	1500	850	Kg
HP	1800	1000	Kg

HP	2000	1200	Kg
HP	2500	1500	Kg
HP	2750	1690	Kg
HP	3000	1900	Kg
HP	3500	2200	Kg
HP	4000	2500	Kg
HP	5000	3150	Kg
HP	7000	4000	Kg
HP	9000	5000	Kg
HP	12000	7800	Kg
HP	18000	11050	Kg

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