








Hydraulic hammers

HP Series



Application areas

| | | L | M | S | |
|--|--|--|---|---|---|
|  Mining and Quarry | Preliminary works | • Overburden removal | ○ | ○ | |
| | | • Bench, road & ramp leveling | ○ | ○ | |
| | | • Roof, face & rib scaling | ○ | ○ | |
| | Secondary demolition | • Boulder reduction in rock pile | ○ | ○ | |
| | | • Removing blockages at crushing systems | ○ | ○ | ○ |
| | Primary rock breaking | • Selective rock breaking | ○ | ○ | |
| • Blastfree mining | | ○ | | | |
| Demolition & renovation  | Light Demolition | • Demolition of masonry structures | ○ | ○ | ○ |
| | | • Brickwork | | ○ | ○ |
| | | • Natural stone | | ○ | ○ |
| | | • Renovation of interiors | | | ○ |
| | | • Autoclaved aerated concrete | ○ | ○ | ○ |
| Demolition of non-reinforced concrete structures | • Primary demolition of lightweight and standard concrete | ○ | ○ | ○ | |
| | • Primary demolition of heavyweight concrete | ○ | ○ | ○ | |
| | • Wall Elements | ○ | ○ | ○ | |
| | • Secondary demolition | ○ | ○ | ○ | |
| Composite steel & concrete structure demolition | • Primary demolition of lightweight and standard reinforced concrete | ○ | ○ | | |
| | • Primary demolition of heavyweight steel - reinforced concrete | ○ | ○ | | |
| | • Secondary Demolition floors, slabs and beams | ○ | ○ | ○ | |
| | • Separating rebars from pillars and struts | | | | |
| | • Fiber-reinforced concrete | ○ | ○ | ○ | |
| | • Cutting rebars and steel reinforcements | | | | |
| Demolition of metallic buildings and structures | • Demolition of refineries | | | | |
| | • Cutting of Metal and steel structures | | | | |
| | • Cutting steel girders/beams | | | | |
| | • Cutting reinforcements | | | | |
| Sorting and Loading | • Sorting | | | | |
| | • Loading | | | | |
| | • Waste handling | | | | |
| | • Site clean-up | | | | |
| Pavement demolition | • Asphalt | ○ | ○ | ○ | |
| | • Concrete | ○ | ○ | ○ | |
| | • Composite surfaces | ○ | ○ | ○ | |
| Earth Moving and Construction  | Earth moving works | • Trenching | ○ | ○ | ○ |
| | | • Ground excavation | ○ | ○ | ○ |
| | | • Floor leveling | | | |
| | | • Soil compaction | | | |
| | | • Trench compaction | | | |
| | | • Loading soil or bulk material | | | |
| Foundation works | • Building foundation excavation | ○ | ○ | | |
| | • Ground leveling | ○ | ○ | ○ | |
| Building construction | • Foundation pile driving | | ○ | ○ | |
| | • Compaction around pillars | | | | |

| | | L | M | S | |
|---|--|--|---|---|---|
| Infrastructures  | Tunnelling | • Tunnel excavation | ○ | ○ | ○ |
| | | • Roof, face & rib scaling | ○ | ○ | ○ |
| | Underwater application | • Dredging | ○ | ○ | ○ |
| | | • Dock deepening & extension | ○ | ○ | ○ |
| | | • Canal deepening & extension | ○ | ○ | ○ |
| | | • Loading soil or bulk material | | | |
| | Trenching | • Handling rock or breakwaters | | | |
| | | • Oil & gas, water & sewage (deep trenching) | ○ | ○ | ○ |
| | | • Trenching | | ○ | ○ |
| | Road construction | • Trench soil compaction | | ○ | ○ |
| • Pile driving and guard rail driving | | | ○ | ○ | |
| • Asphalt repair | | | | | |
| • Maintenance work (driveways, sidewalks and parking lots) | | | | | |
| Slag recycling | • Block paving | | | | |
| | • Boulder reduction in slag heaps | ○ | ○ | | |
| Cleaning & debricking | • Removing blockages at crushing systems | ○ | ○ | ○ | |
| | • Ladles | ○ | ○ | ○ | |
| | • Converter mouths | ○ | ○ | ○ | |
| Gardening & Landscaping | • Kilns | ○ | ○ | ○ | |
| | • Fencing | ○ | ○ | ○ | |
| | • Ground excavation | ○ | ○ | ○ | |
| | • Rock breaking | ○ | ○ | ○ | |
| | • Pit planting | ○ | ○ | ○ | |
| Agriculture and forestry  | • Log splitting | ○ | ○ | ○ | |
| | Forestry | | | | |
| | • Timber log handling | | | | |

L | large hammers

M | midi hammers

S | small 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 small 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 small 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.

midi 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.

maxi 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.

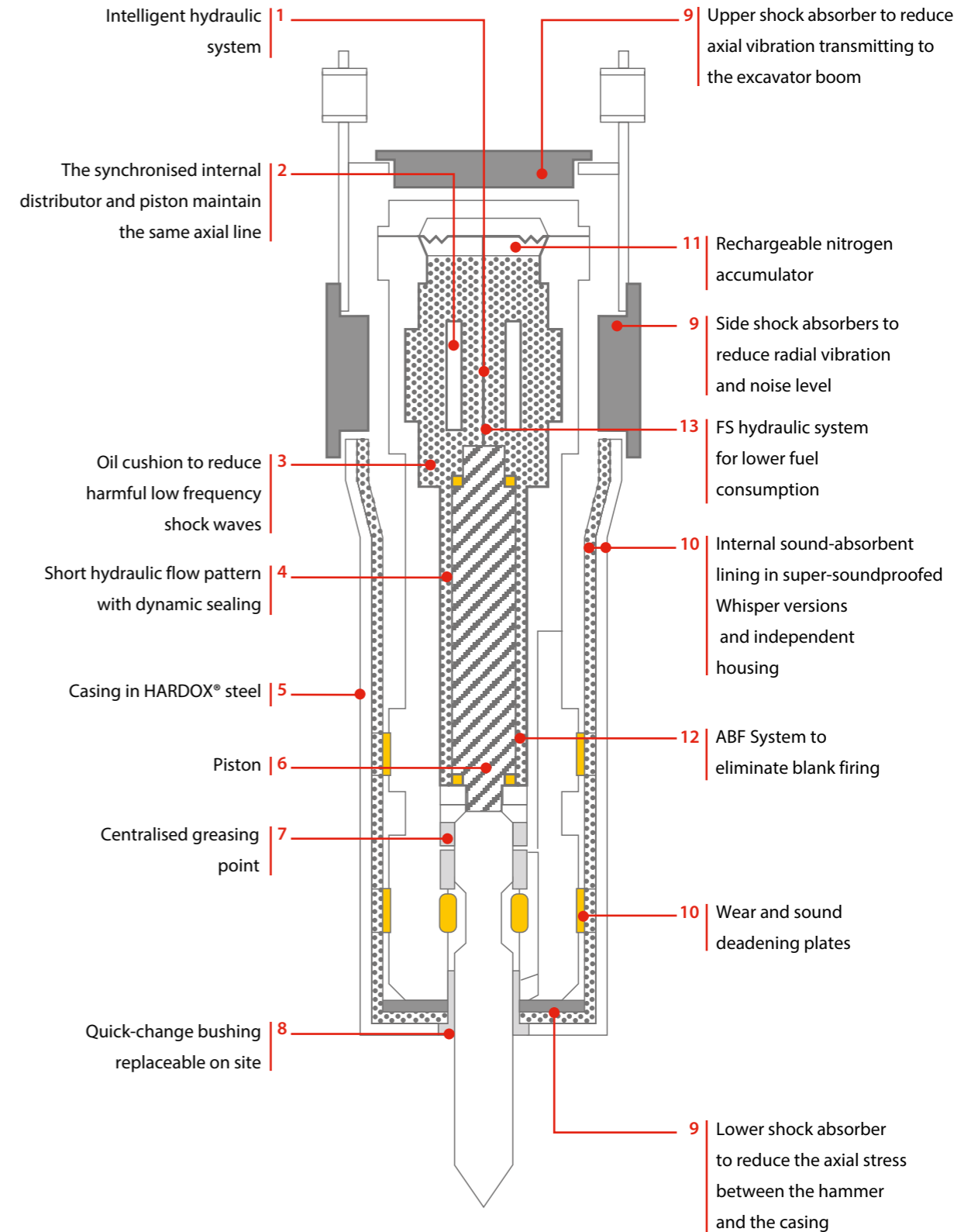
All carriers which mount Indeco hammers benefit from the Indeco dual shock-absorption system **[9]**: an internal hydraulic one and a mechanical one, located outside the body, which substantially reduce the vibrations transmitted to the excavator. The excavator boom is also subject to lower stress levels,

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 midi- and maxi-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.

 **FUEL SAVING** 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.



Small hammer range

HP series

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



| Technical Data | HP 150 FS / HP 150 FS Heavy Duty | HP 200 FS |
|------------------------------------|----------------------------------|------------------------------|
| Type of carrier | 1 2 | 1 2 |
| Excavator weight (possible) | 0,7 ÷ 3 tons | 1,4 ÷ 5 tons |
| Weight of hammer when operated | 80 / 98 Kg (Heavy Duty) | P.B. 130 Kg / W.T.P. 160 Kg* |
| Steel diameter | 45 mm | 48 mm |
| Pressure adjusted to the excavator | 160 bars | 160 bars |
| Back pressure max | 11 bars | 11 bars |
| Energy class per blow | 230 joule | 300 joule |
| Number of blows per minute | 540 ÷ 2040 n/min | 700 ÷ 1800 n/min |

| HP 350 FS | HP 500 FS | HP 600 FS | HP 700 FS | HP 900 FS |
|------------------------------|------------------------------|------------------------------|------------------|------------------|
| 1 2 3 | 1 2 3 | 1 2 3 | 1 3 | 1 3 |
| 1,7 ÷ 6,5 tons | 3 ÷ 8 tons | 3,5 ÷ 10,5 tons | 4 ÷ 12 tons | 5 ÷ 14 tons |
| P.B. 210 Kg / W.T.P. 230 Kg* | P.B. 300 Kg / W.T.P. 320 Kg* | P.B. 340 Kg / W.T.P. 390 Kg* | 440 Kg | 550 Kg |
| 56 mm | 65 mm | 75 mm | 80 mm | 90 mm |
| 160 bars | 160 bars | 170 bars | 170 bars | 170 bars |
| 12 bars | 12 bars | 11 bars | 12 bars | 11 bars |
| 500 joule | 700 joule | 850 joule | 950 joule | 1200 joule |
| 540 ÷ 1540 n/min | 780 ÷ 1620 n/min | 600 ÷ 1340 n/min | 620 ÷ 1500 n/min | 570 ÷ 1180 n/min |

Carrier key



*P.B. pins and bushings version - W.T.P. soundproofed top plate Whisper version

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.

Midi 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 | 450 ÷ 1000 n/min | 440 ÷ 1060 n/min |



| 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 |

Carrier key



Compact excavator

Miniloader

Backhoe loader

Wheeled excavator

Tracked excavator

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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



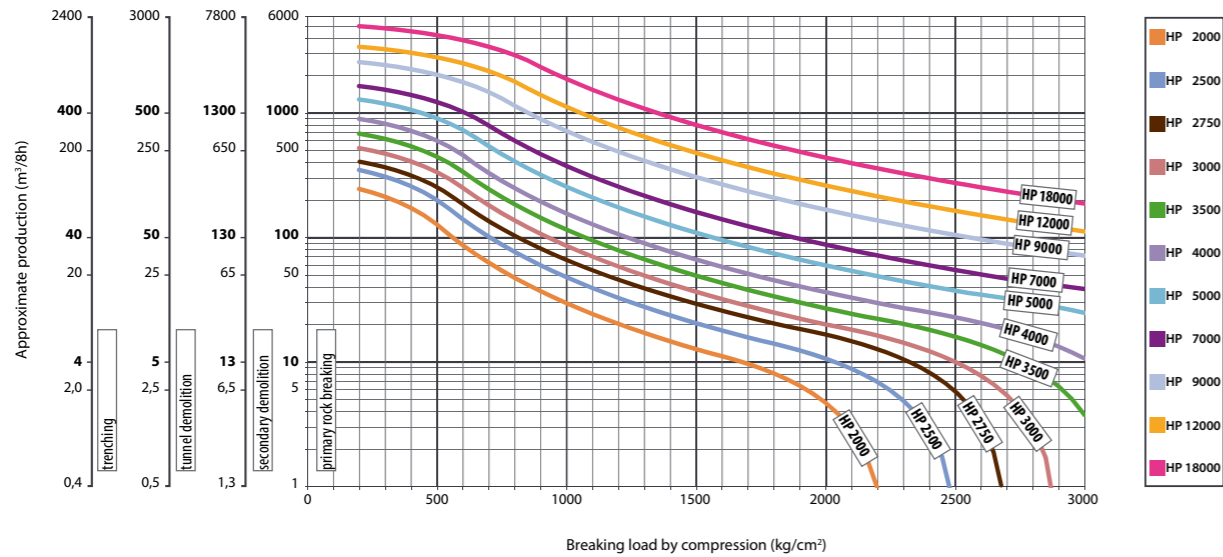
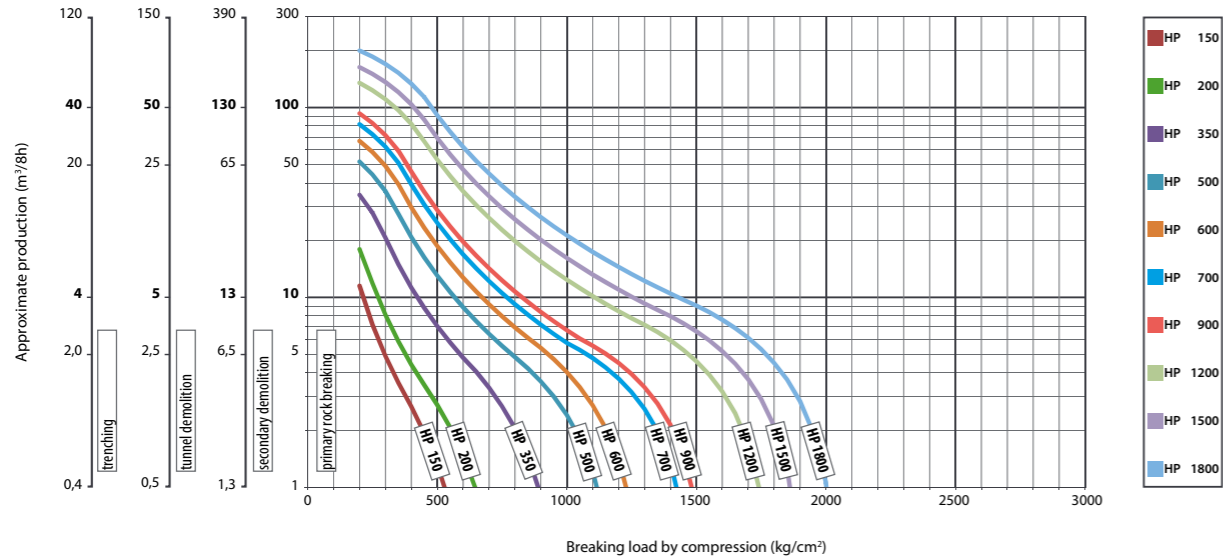
| HP 9000 FS | HP 12000 FS | HP 18000 FS |
|-----------------|-----------------|-----------------|
| 5 | 5 | 5 |
| 39 ÷ 80 tons | 45 ÷ 120 tons | 60 ÷ 140 tons |
| 5000 Kg | 7800 Kg | 11050 Kg |
| 195 mm | 215 mm | 250 mm |
| 210 bars | 230 bars | 230 bars |
| 8 bars | 9 bars | 11 bars |
| 15000 joule | 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)** | Model | Compatibility hammer/carrier (tons)* | Oil pressure adjustment (bars)/ oil flow (l/min)** |
|---------|--------------------------------------|--|----------|--------------------------------------|--|
| HP 150 | 0,7 3 | 105 115 120 125 | HP 2500 | 16 28 | 115 125 130 140 |
| HP 200 | 1,4 5 | 105 115 120 125 | HP 2750 | 16 30 | 120 130 135 145 |
| HP 350 | 1,7 6,5 | 105 115 120 125 | HP 3000 | 19 32 | 125 135 140 150 |
| HP 500 | 3 8 | 105 115 120 125 | HP 3500 | 21 38 | 130 135 140 160 |
| HP 600 | 3,5 10,5 | 105 120 125 130 | HP 4000 | 23 42 | 130 140 145 160 |
| HP 700 | 4 12 | 105 120 125 130 | HP 5000 | 27 50 | 130 140 145 160 |
| HP 900 | 5 14 | 105 120 125 130 | HP 7000 | 32 63 | 140 145 150 165 |
| HP 1200 | 6,5 16 | 105 120 125 130 | HP 9000 | 39 80 | 140 150 155 165 |
| HP 1500 | 10 20 | 115 120 125 140 | HP 12000 | 45 120 | 140 160 165 180 |
| HP 1800 | 12 22 | 115 120 125 140 | HP 18000 | 60 140 | 140 160 170 180 |
| HP 2000 | 15 25 | 115 125 130 140 | | | |

*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**

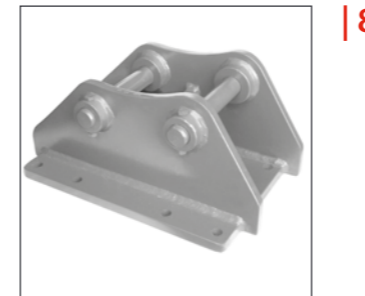
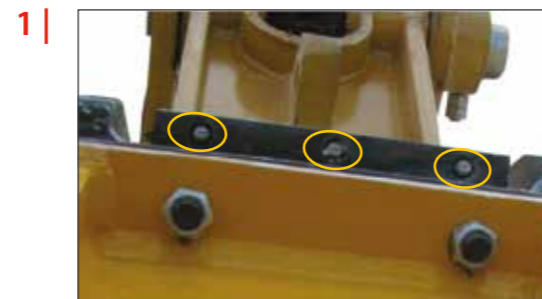
The internal pressurization of the hammer **|2|** prevents dust, water and debris from getting into the hammer through the bushing, as happens during tunnel demolitions and underwater excavations.

Anti-Grease and Anti-Dust System

This system, which is crucial when working in dusty environments and when tunnelling, is made up of two clamps, which are both attached to the tool **|3|** but are located in different positions, 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.



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.



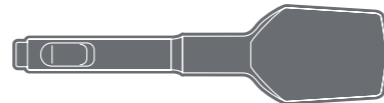
Moil point tool

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 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 | Hammer | Weight |
|--------------------------|---------|----------|----------|
| HP 150 | 80 Kg | HP 2000 | 1200 Kg |
| HP 150 <i>Heavy Duty</i> | 98 Kg | HP 2500 | 1500 Kg |
| HP 200 | 160 Kg | HP 2750 | 1690 Kg |
| HP 350 | 230 Kg | HP 3000 | 1900 Kg |
| HP 500 | 320 Kg | HP 3500 | 2200 Kg |
| HP 600 | 390 Kg | HP 4000 | 2500 Kg |
| HP 700 | 440 Kg | HP 5000 | 3150 Kg |
| HP 900 | 550 Kg | HP 7000 | 4000 Kg |
| HP 1200 | 650 Kg | HP 9000 | 5000 Kg |
| HP 1500 | 850 Kg | HP 12000 | 7800 Kg |
| HP 1800 | 1000 Kg | HP 18000 | 11050 Kg |

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