

# Shears and Rail Cutters

ISS and IRC Series







## ISS shears

Vital tools for anyone working in the scrap metal or recycling sectors, Indeco ISS Steel Shears stand out for their cutting-edge design, for their extreme robustness and for their technical innovations which substantially increase their efficiency.

Rapid, efficient and surprisingly powerful, Indeco ISS shears are the ideal choice for demolishing any type of metal structure.

Indeco's tried and tested continuous rotation hydraulic system, found on all of our other rotating products, enables the shear to work in the best possible position, while its large jaw opening and fast cycle times and its incredible cutting power, make all demolition operations fast and effective.

Special extra-strength HARDOX® alloy steel make ISS shears outstandingly resistant and reliable.

Each of the main knives and guide-blades was designed with four cutting surfaces and so can be rotated three times before replacement; promising more consistency, uptime, and production in your operation.



## IRC Rail Cutter

New addition to the range of Indeco products dedicated to the recycling of ferrous materials, the IRC Rail-Cutting Shears are hydraulic tools specifically designed for cutting railway tracks, tramway rails, and underground rails, made with heat-treated steel to withstand the enormous forces. The special design of their jaws, combined with the efficiency of the hydraulic system, and the sturdiness of the structure in special HARDOX® steel, lets you cut rails up to 75 kg of mass per metre, with hardness up to 300 Brinell. Indeco IRC rail cutter shears are designed to operate at best on the different standards of rails found in the EU, the USA and Asian countries.



# Features of Indeco hydraulic shears

The regeneration valve [1] speeds up no-load movement of the jaw, which opens and closes more quickly, thus reducing cycle times and increasing productivity.

The chassis [2], made from extra-strength HARDOX® alloy steel, eliminates any flexing of the shear body. The unique integrated dual guide system [3] can be used to adjust the alignment tolerance of the jaw and prevents it from buckling during the cutting stroke.

The interchangeable "quick change" wear bushings [4] ensure that the knives are always optimally aligned.

The heavy-duty pivot group [5] provides long-term cutting efficiency, keeps jaws aligned and prevents buckling.

The innovative design [6] improves cutting efficiency compared to similar products.

The large jaw opening [7] provides greater flexibility for numerous applications.

The special insert bushings [8] are made from an anti-friction material with a dust seal.

The large, powerful hydraulic cylinder [9] is an exclusive Indeco design, and provides enough force to deal with any type of working conditions. Its long-lasting seals are able to withstand up to 700 bars of pressure.

The baseplate for the ISS in fixed configuration [10] makes the attachment much lighter and less bulky, which means that a larger shear can be used on the excavator.

The shears have full high-speed 360° hydraulic rotation [11] for better positioning and optimal cutting in any working position.

The mounting bracket for the 2nd-member configuration [12] is used to mount the ISS straight onto the excavator boom. In this configuration, ideal for recycling ferrous material, a large attachment can be mounted even on a relatively light carrier.

The universal baseplate for 2nd member mounting brackets [13] is compatible with all carriers.

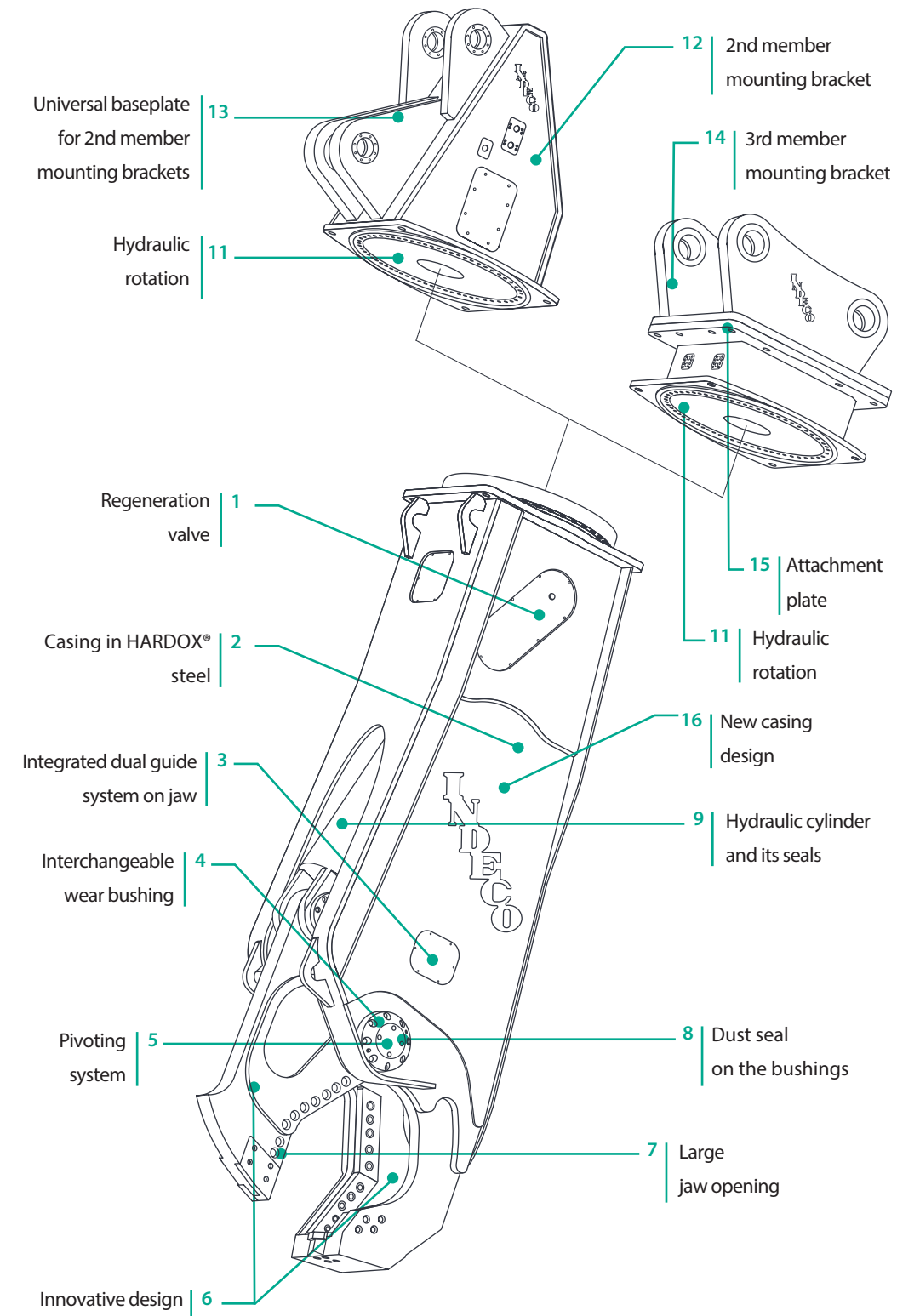
The 3rd member mounting bracket [14] is used to

mount the ISS on the carrier stick (bucket-mounted), ideal for demolition jobs.

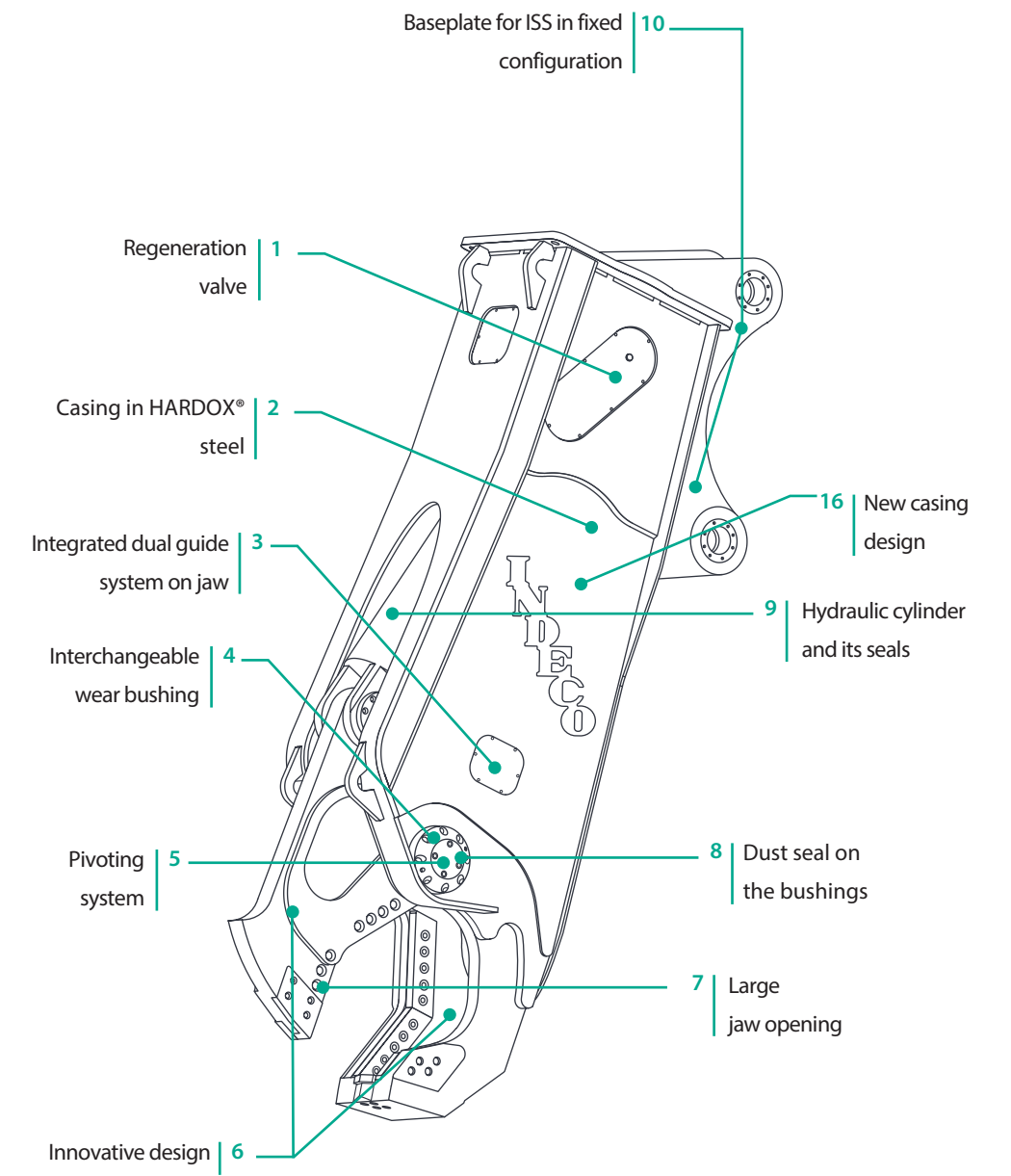
The attachment plate [15] is compatible with the plate for Indeco breakers of similar weight.

In the latest design [16], the shear is more compact with a thicker casing, thus improving its manoeuvrability and balance, as well as increasing its overall robustness.

## 2nd and 3rd member configuration



## Fixed configuration

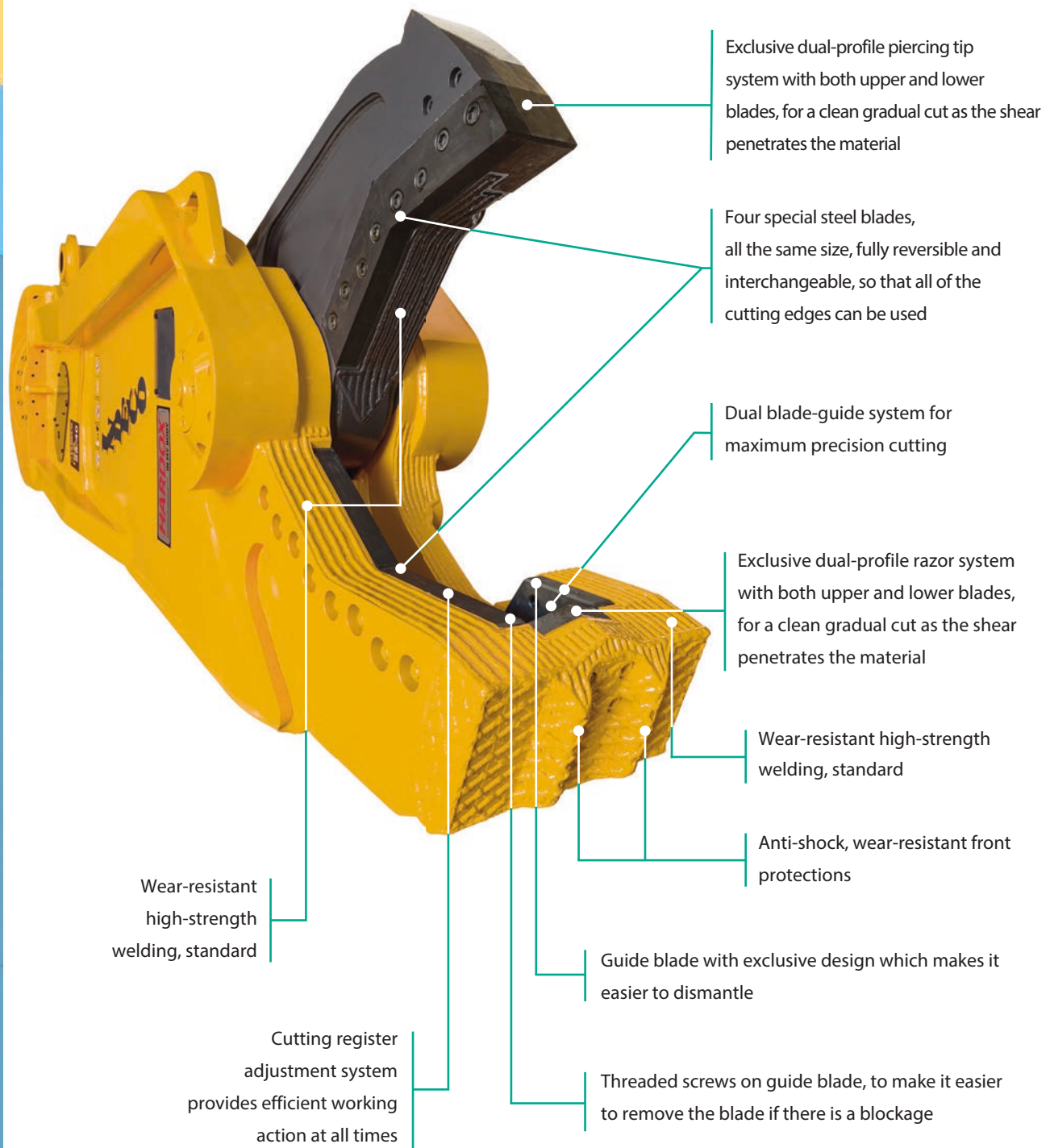






### Cutting capacity

The Indeco ISS shears have exceptional capacity and cutting force, due to the following specific design features:





Technical Data	ISS 5/7			ISS 8/13			ISS 10/20	
	1	2	3	1	2	3	4	5
Type of carrier								
Min. excavator weight in fixed version (boom-mounted) configuration	4 ton			6 ton			8 ton	
Min. excavator weight in 2nd member (boom-mounted) configuration	5 ton			8 ton			10 ton	
Min. excavator weight in 3rd member (bucket-mounted) configuration	7 ton			13 ton			20 ton	
Attachment operating weight fixed version	480 Kg			1050 Kg			2000 Kg	
Attachment operating weight 2nd member	570 Kg			1300 Kg			2400 Kg	
Attachment operating weight 3rd member	570 Kg			1250 Kg			2400 Kg	
Maximum working pressure	300 bar / 220 bar*			350 bar			350 bar	
Oil delivery	50 ÷ 120 l/min			90 ÷ 180 l/min			100 ÷ 200 l/min	
Maximum rotation oil flow	10 l/min			15 l/min			20 l/min	
Maximum rotation pressure	110 bar			110 bar			110 bar	
Maximum clamping force at tip	45 ton			80 ton			120 ton	
Clamping force class	150 ton			300 ton			600 ton	
Length	1700 mm			2100 mm			2724 mm	
Jaw width	340 mm			400 mm			450 mm	
Jaw opening	350 mm			470 mm			550 mm	
Max jaw depth	320 mm			450 mm			570 mm	
Closure time	2 ÷ 3 s			2,9 ÷ 5 s			2,4 ÷ 4,6 s	
Opening time	1 ÷ 1,6 s			1,5 ÷ 3 s			2,2 ÷ 4,2 s	
Compatibility of attachment plate with breaker	HP 900			HP 2000 - HP 2500			HP 3000 ÷ HP 4000	

N.B. Weights may vary according to the various configurations. The information in this catalog is subject to change without notice and without any obligation or responsibility on our part. The content of this catalog is provided as a courtesy to readers and constitutes non binding information only.

\*low pressure version

#### Carrier key



ISS Fixed



ISS 2nd member



ISS 3rd member

Common configurations on the following models: ISS 5/7 - ISS 8/13 - ISS 10/20 - ISS 20/30 - ISS 25/40 - ISS 30/50 - ISS 35/60 - ISS 45/90

Technical Data	ISS 20/30	ISS 25/40	ISS 30/50
Type of carrier	<b>5</b>	<b>5</b>	<b>5</b>
Min. excavator weight in fixed version (boom-mounted) configuration	18 ton	23 ton	27 ton
Min. excavator weight in 2nd member (boom-mounted) configuration	20 ton	25 ton	30 ton
Min. excavator weight in 3rd member (bucket-mounted) configuration	30 ton	40 ton	50 ton
Attachment operating weight fixed version	3250 Kg	4500 Kg	5600 Kg
Attachment operating weight 2nd member	3600 Kg	5000 Kg	6300 Kg
Attachment operating weight 3rd member	3650 Kg	4800 Kg	6100 Kg
Maximum working pressure	350 bar	350 bar	350 bar
Oil delivery	200 ÷ 300 l/min	220 ÷ 360 l/min	240 ÷ 400 l/min
Maximum rotation oil flow	30 l/min	40 l/min	50 l/min
Maximum rotation pressure	110 bar	110 bar	130 bar
Maximum clamping force at tip	140 ton	195 ton	210 ton
Clamping force class	800 ton	1100 ton	1300 ton
Length	3400 mm	3500 mm	4040 mm
Jaw width	560 mm	670 mm	680 mm
Jaw opening	660 mm	760 mm	850 mm
Max jaw depth	680 mm	770 mm	860 mm
Closure time	2,8 ÷ 4 s	3,2 ÷ 5 s	3,6 ÷ 5,8 s
Opening time	2,6 ÷ 3,8 s	2,8 ÷ 4,8 s	3,4 ÷ 5,6 s
Compatibility of attachment plate with breaker	HP 7000 - HP 9000	HP 7000 - HP 9000	HP 7000 - HP 9000

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#### Carrier key



ISS Fixed



ISS 2nd member



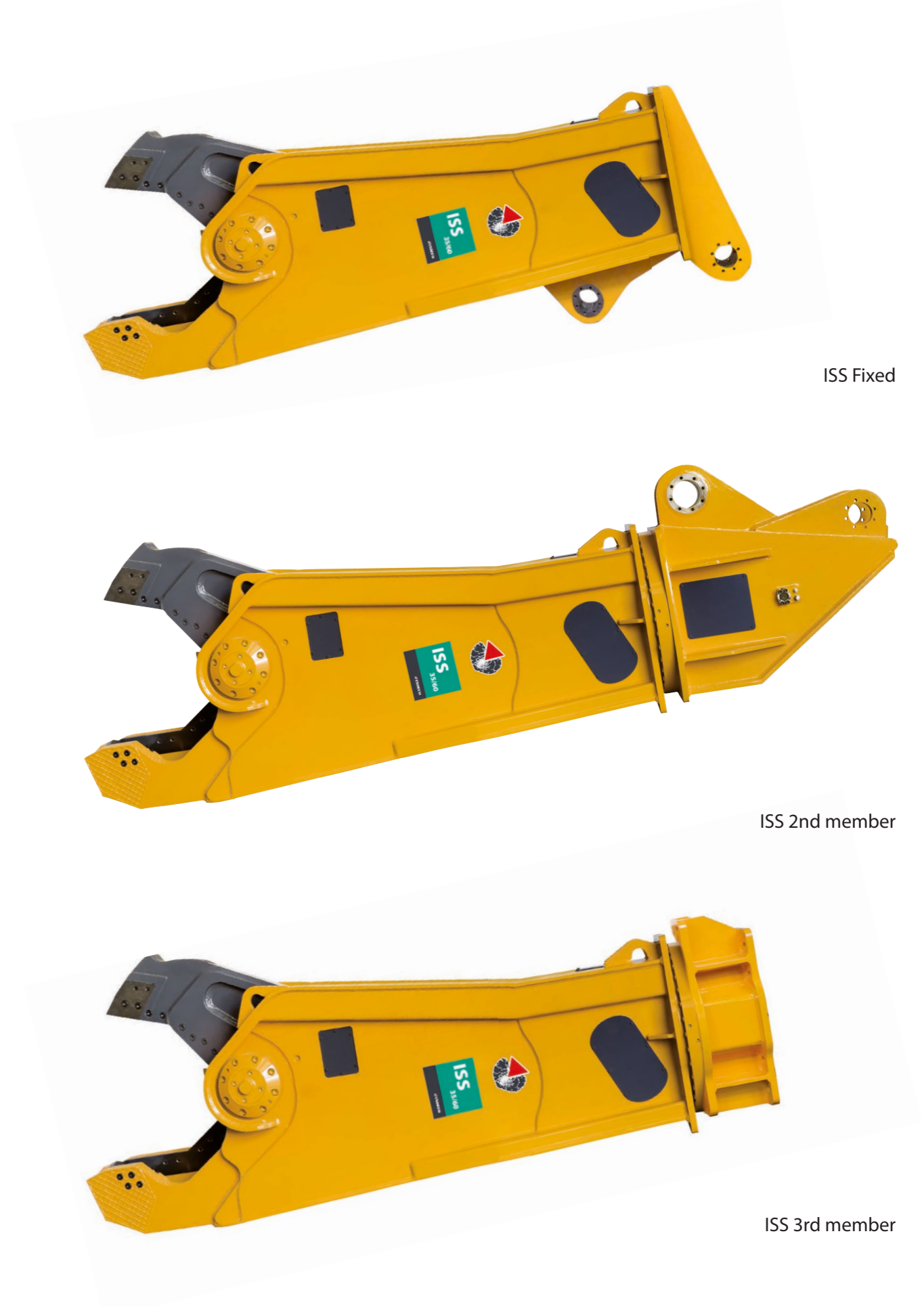
ISS 3rd member

Common configurations on the following models: ISS 5/7 - ISS 8/13 - ISS 10/20 - ISS 20/30 - ISS 25/40 - ISS 30/50 - ISS 35/60 - ISS 45/90

Technical Data	ISS 35/60	ISS 45/90
Type of carrier	<b>5</b>	<b>5</b>
Min. excavator weight in fixed version (boom-mounted) configuration	33 ton	42 ton
Min. excavator weight in 2nd member (boom-mounted) configuration	35 ton	45 ton
Min. excavator weight in 3rd member (bucket-mounted) configuration	60 ton	90 ton
Attachment operating weight fixed version	6800 Kg	9700 Kg
Attachment operating weight 2nd member	7500 Kg	11000 Kg
Attachment operating weight 3rd member	7600 Kg	10400 Kg
Maximum working pressure	350 bar	350 bar
Oil delivery	300 ÷ 550 l/min	360 ÷ 700 l/min
Maximum rotation oil flow	50 l/min	60 l/min
Maximum rotation pressure	130 bar	130 bar
Maximum clamping force at tip	240 ton	275 ton
Clamping force class	1500 ton	2500 ton
Length	4100 mm	4840 mm
Jaw width	760 mm	815 mm
Jaw opening	950 mm	1100 mm
Max jaw depth	970 mm	1120 mm
Closure time	3,6 ÷ 6,4 s	3,8 ÷ 7,2 s
Opening time	3,2 ÷ 5,6 s	3,6 ÷ 7 s
Compatibility of attachment plate with breaker	HP 12000 - HP 18000	HP 12000 - HP 18000

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#### Carrier key



ISS Fixed

ISS 2nd member

ISS 3rd member

Common configurations on the following models: ISS 5/7 - ISS 8/13 - ISS 10/20 - ISS 20/30 - ISS 25/40 - ISS 30/50 - ISS 35/60 - ISS 45/90



# Appetite guide

Indeco shears are designed to cut and reduce the size of the most common materials used in demolitions in the mechanical, naval and construction sectors. The figures set out below refer to cutting capacity under normal working conditions. Results may vary

according to such factors as how robust the material to be cut is, what condition the shear blades are in, the characteristics of the carrier and the operator's ability. Appropriate maintenance of the shear is crucial for maximum productivity of cutting operations.

	ISS 5/7	ISS 8/13	ISS 10/20	ISS 20/30	ISS 25/40	ISS 30/50	ISS 35/60	ISS 45/90
●	20 mm	35 mm	50 mm	70 mm	90 mm	105 mm	116 mm	145 mm
⊙	60x3 mm*	220x6 mm*	265x9 mm*	320x9,5 mm*	440x9,5 mm*	500x9,5 mm*	570x9,5 mm*	713x9,5 mm*
■	20 mm	40 mm	55 mm	65 mm	85 mm	96 mm	110 mm	137 mm
▬	6 mm**	10 mm**	13 mm**	16 mm**	20 mm**	22 mm**	25 mm**	31 mm**
I	120 IPE***	240 IPE***	330 IPE***	400 IPE***	450 IPE***	500 IPE***	550 IPE***	600 IPE***
I	100 HEA	200 HEA	260 HEA	300 HEA	340 HEA	360 HEA	400 HEA	450 HEA
I	150 I BEAM (W)	250 I BEAM (W)	330 I BEAM (W)	410 I BEAM (W)	460 I BEAM (W)	560 I BEAM (W)	660 I BEAM (W)	790 I BEAM (W)
I JIS G3192	100x100x17	200x200x50	250x250x72	300x300x93	400x300x105	450x300x121	500x300x125	600x300x133

\*Refers to mild steel tubing and not to other materials such as stainless steel, cast steel etc.

\*\*The shear tip will take longer to cut into thicker sheet metal

\*\*\*These figures may vary for beams of different shapes, thicknesses and material

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.





# Characteristics of Indeco's rail cutters

Structure **[1]** with an extremely robust design, entirely made of HARDOX® 450 to withstand the strong stresses of very heavy-duty work, and particularly compact to facilitate coupling with machines with a wider weight range.

Large hydraulic cylinder **[2]**, to provide greater power and to respond to the heaviest stresses, equipped with metal alloy sliding components to ensure maximum reliability.

Wider maximum opening **[3]** than competitors, for greater flexibility, being able to 'process' rails with the most diverse profiles and dimensions on the global market.

The cutters **[4]** in special hardened material, interchangeable and rotatable, can be used up to 4 times in order to always have efficient cutting angles.

The specific design of the claws **[5]** and of the cutter profiles enables the cutting of rails up to 75 kg mass per meter and up to 300 Brinell hardness.

The 'quick change' interchangeable wear bushings **[6]** make it so that the cutters are always aligned optimally.

The exceptionally robust pivoting system **[7]** ensures long-lasting cutting efficiency and keeps the jaws aligned, preventing twisting.

Efficient and easily accessible hydraulic system **[8]**. Full 360° hydraulic rotation system **[9]** for greater flexibility and speed.

Equipped with relief valves for flow and pressure, it guarantees greater reliability, durability, and positioning precision.

The attachment plate **[10]** is compatible with that of Indeco hammers of the same weight.

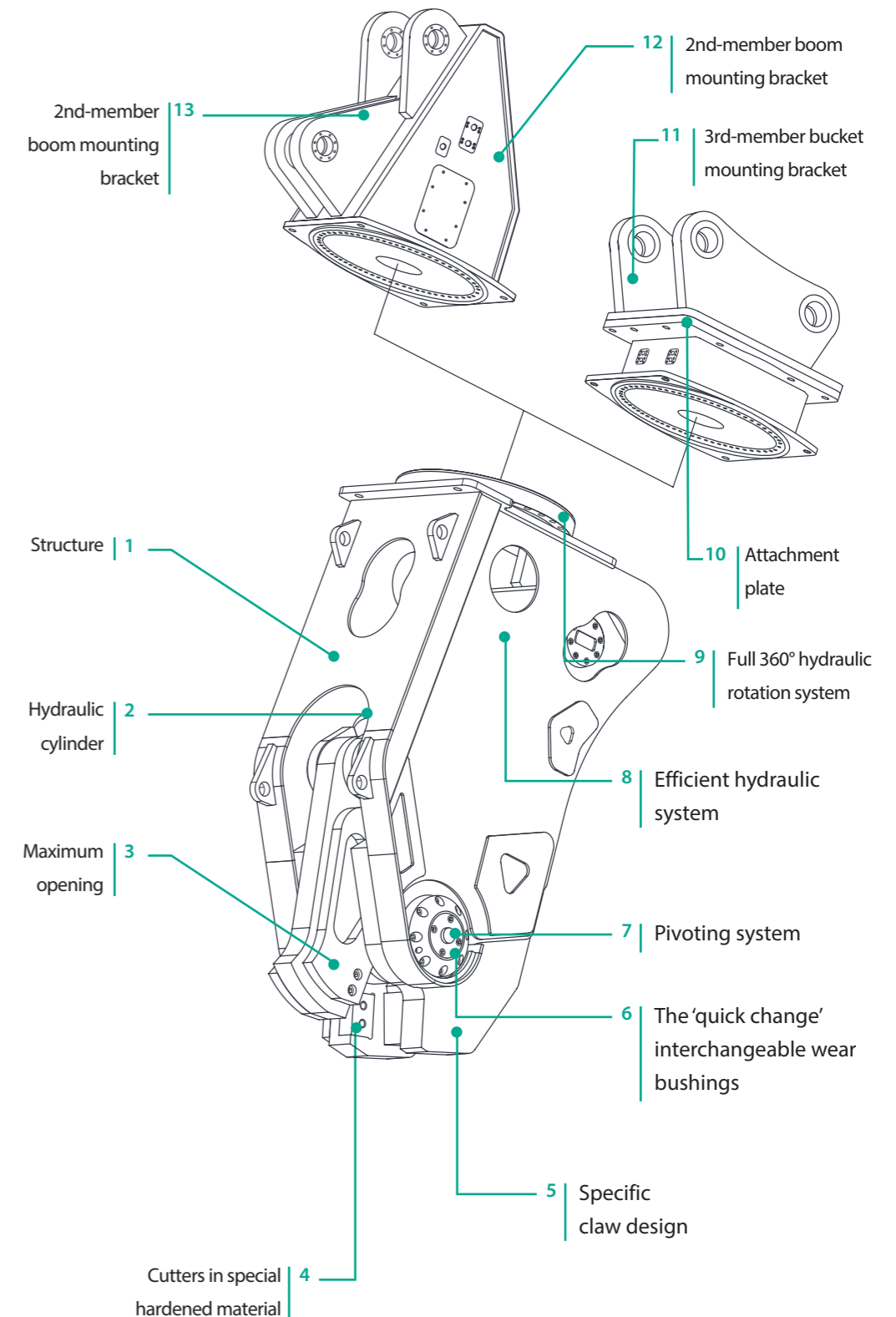
The 3rd-member mounting bracket **[11]** lets you mount the IRC on the carrier stick (bucket-mounted) of the excavator.

The 2nd-member mounting bracket **[12]** lets you mount the IRC directly onto the excavator boom.

In this configuration, large equipment can be mounted even on a low weight machine.

The universal attachment plate for 2nd-member mounting brackets **[13]** is compatible with all excavators.


## 2nd and 3rd member configuration





## Technical Data

IRC 30

Type of carrier	<b>5</b>
Min. excavator weight in 2nd member (boom-mounted) configuration	20 ton
Min. excavator weight in 3rd member (bucket-mounted) configuration	30 ton
Attachment operating weight 2nd member	4300 Kg
Attachment operating weight 3rd member	4200 Kg
Maximum working pressure	350 bar
Oil delivery	250 ÷ 400 l/min
Maximum rotation oil flow	30 l/min
Maximum rotation pressure	110 bar
Maximum clamping force at tip	550 ton
Clamping force class	1000 ton
Length	2650 mm
Jaw width	740 mm
Jaw opening	220 mm
Max jaw depth	230 mm
Closure time	3 ÷ 5 s
Opening time	2 ÷ 3 s
 Rail (<300HB)	75 Kg/m
Compatibility of attachment plate with breaker	HP 5000



IRC 3rd member

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## Carrier key



Compact excavator

Miniloader

Backhoe loader

Wheeled excavator

Tracked excavator



# Accessories

## 1 | Indeconnect system

New remote monitoring system, based on the principles of the Internet of Things, to prevent equipment obsolescence and keep high performance.

The 'Indeconnect' system consists of a **device** equipped with 4G technology for a wireless connection to the network, to be mounted on the equipment, and a cloud-based **web platform** you can access from mobile devices (with an app) or from PC, that lets you view the data transmitted in real time by each installed device: working hours, working position in space, hydraulic oil temperature, ambient temperature, GPS position, and more.

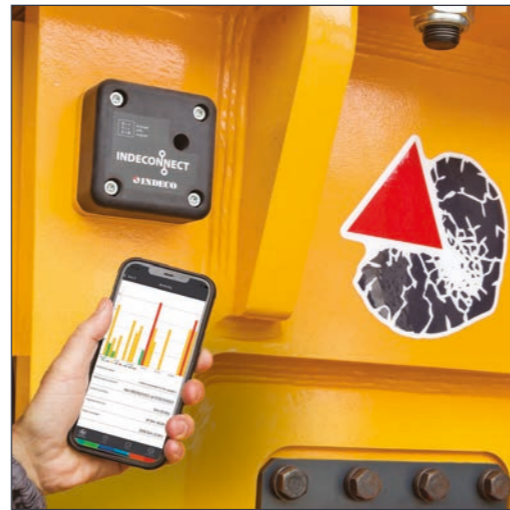
Through Indeconnect you can:

- **Monitor productivity**, making sure each Indeco tool is working as intended
- **Check operations**, verifying in real time the various internal and external parameters of the equipment to make sure that it is used in optimal conditions and correctly
- **Increase security**, by remotely checking the position of the equipment through GPS
- **Plan maintenance**, monitoring the health of each Indeco tool in real time, also through the automatic alert and messaging system that lets you order spare parts and reduce machine downtime to a minimum
- **Optimise rental**, by supervising and monitoring the management of rented equipment.

## 2 | Connecting hoses

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

1 |



2 |



3 |



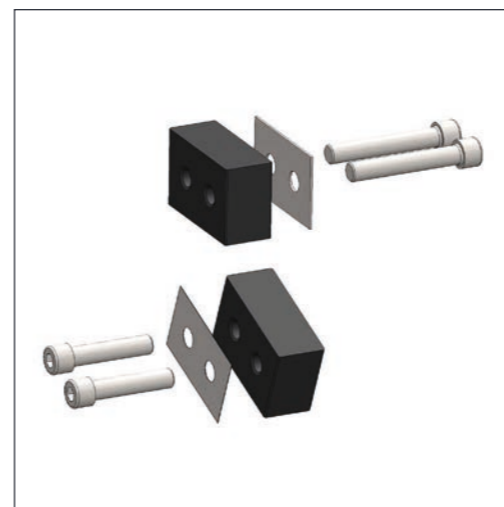
4 |



5 |



6 |



## 3 | Special 2nd member universal mounting bracket

Indeco have designed our second-member mounting system to be flexible, extremely strong and long-lasting, and it can be used on a variety of different carriers. Digital machined-true surfaces ensure perfect alignment of the rotating components, and all service items are easily accessed via the four access panels.

## 4 | Mounting bracket for 3rd member configuration

Indeco have designed our 3rd member mounting brackets to give the operator the best flexibility in terms of range of reach and positioning. And they're designed identical to OEM bucket dimensions with pre-installed pins; allowing for quick change as needed and the use of quick-coupler systems if desired.

## 5 | ISS blades



Made with special heat-treated steels, using an exclusive Indeco technology which optimizes their performance and durability.

## 6 | IRC blades

Specially designed and heat-treated to cut rails of any size. Interchangeable and reversible, they can be used on all four sides.



# Application areas

		ISS			IRC		
		F	II	III	II	III	
 <p><b>Demolition &amp; renovation</b></p>	<b>Light Demolition</b> <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>						
	<b>Demolition of non-reinforced concrete structures</b> <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>						
	<b>Composite steel &amp; concrete structure demolition</b> <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>						
	<b>Demolition of metallic buildings and structures</b> <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>	○	○	○			
	<b>Sorting and Loading</b> <ul style="list-style-type: none"> <li>Sorting</li> <li>Loading</li> <li>Waste handling</li> <li>Site clean-up</li> </ul>						
	<b>Pavement demolition</b> <ul style="list-style-type: none"> <li>Asphalt</li> <li>Concrete</li> <li>Composite surfaces</li> </ul>						
	 <p><b>Recycling</b></p>	<b>Processing</b> <ul style="list-style-type: none"> <li>Scrap material processing</li> <li>Cutting tyres</li> <li>Processing rail cars</li> <li>Processing cars, trucks and general automotive</li> <li>Cutting tanks</li> <li>Cutting of railway tracks, tramway rails, and underground rails</li> </ul>	○	○	○		
		<b>Handling and sorting</b> <ul style="list-style-type: none"> <li>Scrap material handling</li> <li>Scrap material sorting</li> <li>Urban waste</li> <li>Industrial waste</li> <li>Wood and tyres</li> </ul>		○	○		
		<b>Downsizing and sorting</b> <ul style="list-style-type: none"> <li>Material downsizing and sorting in recycling quarries</li> </ul>					
		<b>Recycling of ferrous material</b> <ul style="list-style-type: none"> <li>Recycling of ferrous material</li> </ul>	○	○	○	○	○

F| Fixed configuration    II| Second-member configuration    III| Third-member configuration





## The full range of other Indeco products

Products		Weight		Products		Weight		Products		Weight	
IFP	8 X	750	Kg	IHC	50	200	Kg	ISS***	8/13	1250	Kg
IFP	13 X	1300	Kg	IHC	70	445	Kg	ISS***	10/20	2400	Kg
IFP	19 X	1800	Kg	IHC	75	485	Kg	ISS***	20/30	3650	Kg
IFP	28 X	2800	Kg	IHC	150	970	Kg	ISS***	25/40	4800	Kg
IFP	35 X	3450	Kg	IHC	250	1280	Kg	ISS***	30/50	6100	Kg
IFP	45 X	4550	Kg	IHC R	50	425	Kg	ISS***	35/60	7600	Kg
IRP	5 X	570	Kg	IHC R	70	630	Kg	ISS***	45/90	10400	Kg
IRP	11 X	1150	Kg	IHC R	75	670	Kg	IRC***	30	4200	Kg
IRP	18 X	1700	Kg	IHC R	150	1185	Kg	IMH	3	385	Kg
IRP	23 X	2300	Kg	IHC R	250	1520	Kg	IMH	5	535	Kg
IRP	29 X	2950	Kg	IMG S**	300	285	Kg	IMH	6	545	Kg
IRP	36 X	3600	Kg	IMG S**	400	380	Kg	IMH	8	580	Kg
IRP	45 X	4500	Kg	IMG S**	600	570	Kg	IMH	10	735	Kg
IMP*	15	1500	Kg	IMG S**	1200	1140	Kg	IMH	14	1050	Kg
IMP*	20	2080	Kg	IMG S**	1700	1610	Kg	IMH	20	1500	Kg
IMP*	25	2400	Kg	IMG S**	2300	2180	Kg	IMH	3.2 SS	1000	Kg
IMP*	35	3500	Kg	IMG S**	2800	2650	Kg	IMH	4.2 SS	1400	Kg
IMP*	45	4500	Kg	ISS***	5/7	570	Kg				

\*Crusher configuration - \*\*Sorter configuration - \*\*\*Third-member configuration



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