

# Shears and Rail Cutters

ISS and IRC Series



# 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.

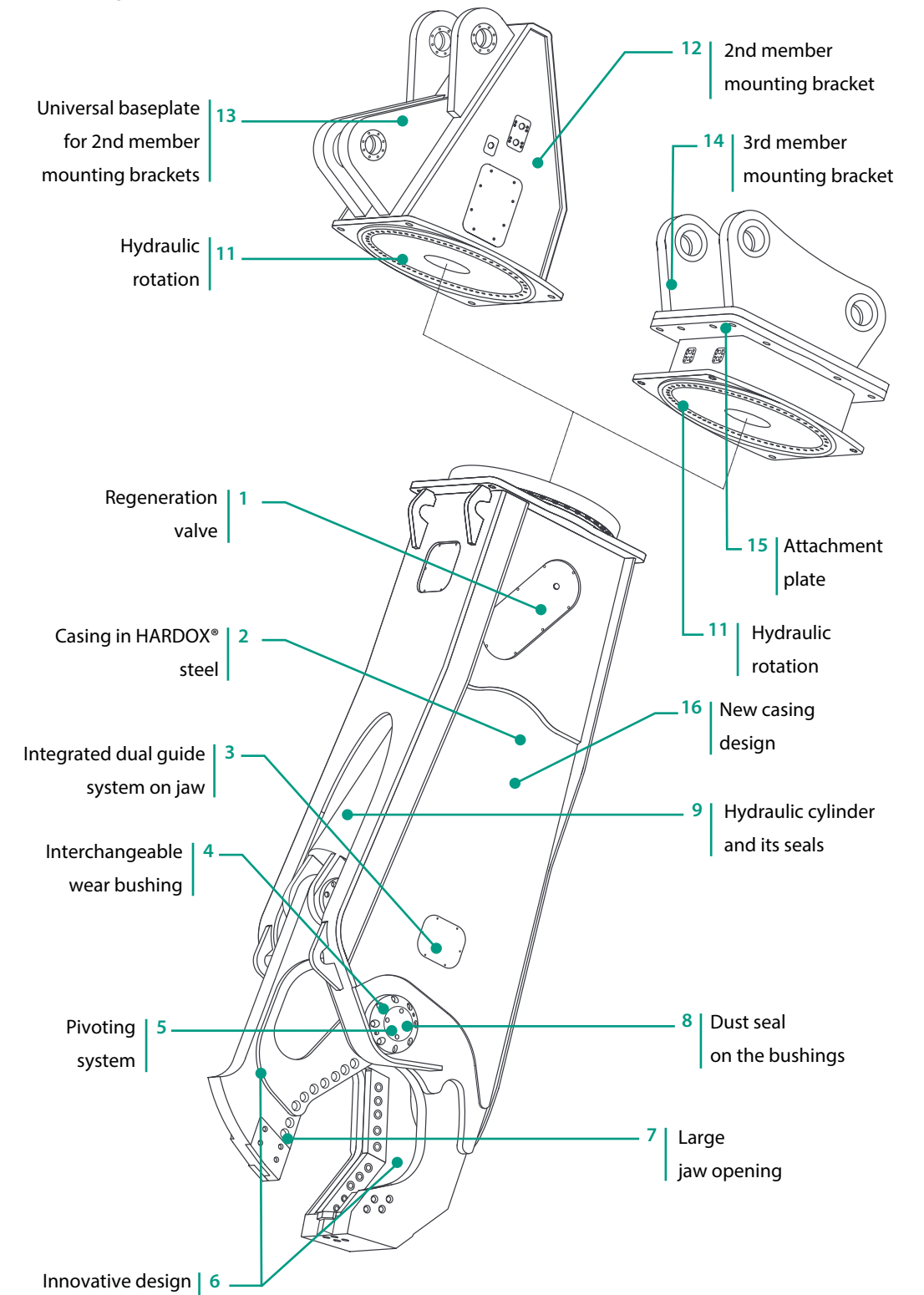
The universal baseplate for 2nd member mounting brackets **[13]** is compatible with all carriers.

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 hammers of similar weight.

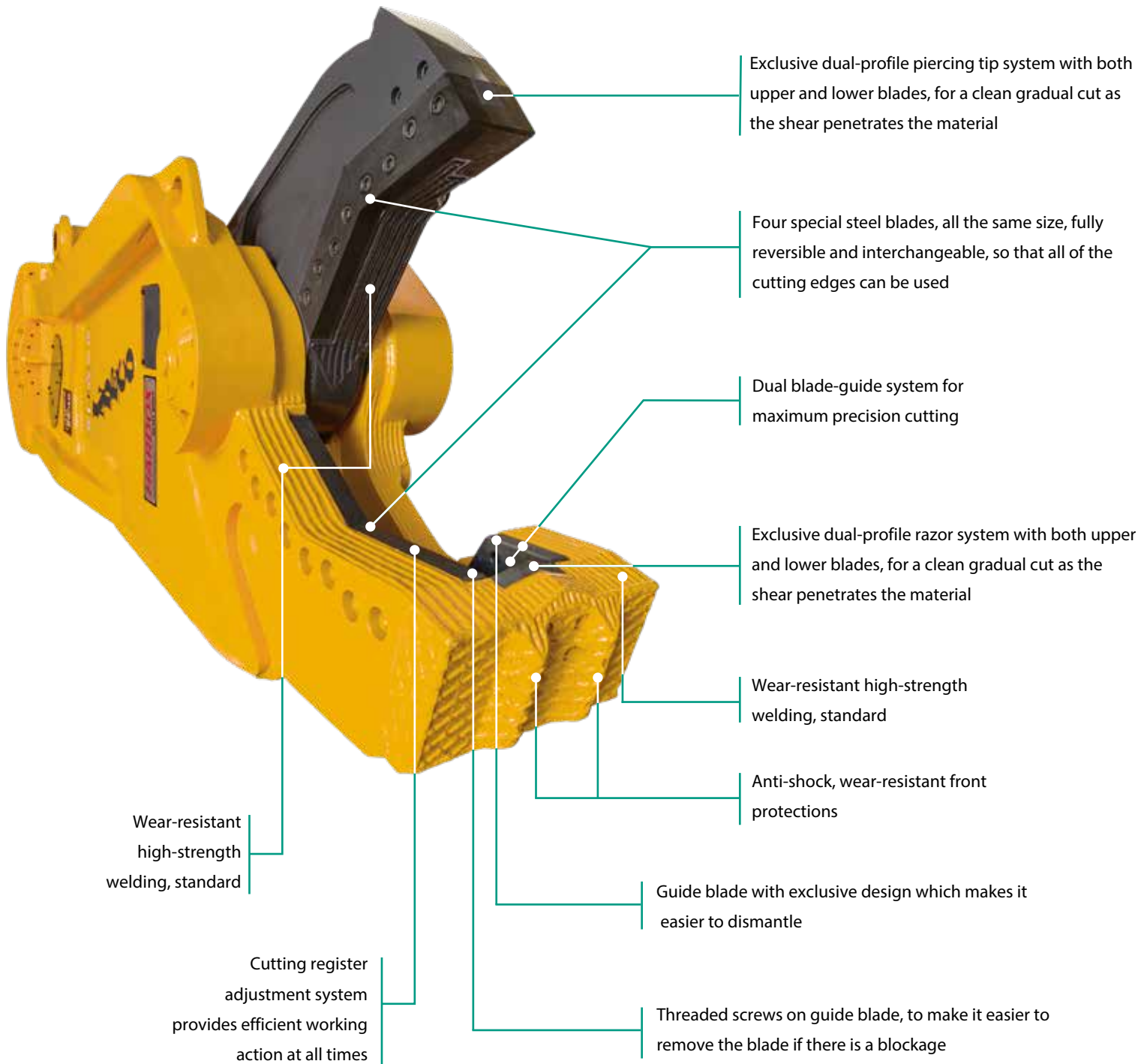
In the latest design **[16]**, the shear is more compact with a thicker casing, thus improving its manoeuvrability and balance, as well as increasing its overall robustness.

## 2nd and 3rd member configuration



## 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
Type of carrier	<b>1 2 3</b>	<b>1 2 3</b>	<b>4 5</b>
Min. excavator weight in fixed version <small>(boom-mounted) configuration</small>	8800 lbs	13200 lbs	17600 lbs
Min. excavator weight in 2nd member <small>(boom-mounted) configuration</small>	11000 lbs	17600 lbs	22000 lbs
Min. excavator weight in 3rd member <small>(bucket-mounted) configuration</small>	15400 lbs	28600 lbs	44000 lbs
Attachment operating weight fixed version	1060 lbs	2300 lbs	4400 lbs
Attachment operating weight 2nd member	1250 lbs	2860 lbs	5280 lbs
Attachment operating weight 3rd member	1250 lbs	2750 lbs	5280 lbs
Maximum working pressure	4400 psi / 3200 psi*	5100 psi	5100 psi
Oil delivery	13 ÷ 32 gpm	24 ÷ 48 gpm	25 ÷ 55 gpm
Maximum rotation oil flow	3 gpm	4 gpm	5 gpm
Maximum rotation pressure	1650 psi	1650 psi	1650 psi
Maximum clamping force at tip	45 tons	80 tons	120 tons
Clamping force class	150 tons	300 tons	600 tons
Length	67 in	83 in	107 in
Jaw width	13.4 in	16 in	18 in
Jaw opening	13.8 in	18.5 in	22 in
Max jaw depth	12.6 in	18 in	22.5 in
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 hammer	HP 1250	HP 3000 - HP 4000	HP 5000 ÷ HP 7500

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



Compact excavator



Miniloader



Backhoe loader



Wheeled excavator



Tracked excavator



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	39600 lbs	50600 lbs	59400 lbs
Min. excavator weight in 2nd member (boom-mounted) configuration	44000 lbs	55000 lbs	66000 lbs
Min. excavator weight in 3rd member (bucket-mounted) configuration	66000 lbs	88000 lbs	110000 lbs
Attachment operating weight fixed version	7150 lbs	9900 lbs	12300 lbs
Attachment operating weight 2nd member	7920 lbs	11000 lbs	13860 lbs
Attachment operating weight 3rd member	8030 lbs	10560 lbs	13420 lbs
Maximum working pressure	5100 psi	5100 psi	5100 psi
Oil delivery	50 ÷ 80 gpm	55 ÷ 95 gpm	65 ÷ 105 gpm
Maximum rotation oil flow	8 gpm	11 gpm	13 gpm
Maximum rotation pressure	1650 psi	1650 psi	1950 psi
Maximum clamping force at tip	140 tons	195 tons	210 tons
Clamping force class	800 tons	1100 tons	1300 tons
Length	134 in	138 in	159 in
Jaw width	22 in	26 in	27 in
Jaw opening	26 in	30 in	33.5 in
Max jaw depth	27 in	30.5 in	34 in
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 hammer	HP 12000 - HP 14000	HP 12000 - HP 14000	HP 12000 - HP 14000

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#### Carrier key



Compact excavator



Miniloader



Backhoe loader



Wheeled excavator



Tracked excavator



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	72600 lbs	92400 lbs
Min. excavator weight in 2nd member (boom-mounted) configuration	77000 lbs	99000 lbs
Min. excavator weight in 3rd member (bucket-mounted) configuration	132000 lbs	198000 lbs
Attachment operating weight fixed version	14960 lbs	21340 lbs
Attachment operating weight 2nd member	16500 lbs	24200 lbs
Attachment operating weight 3rd member	16720 lbs	22880 lbs
Maximum working pressure	5100 psi	5100 psi
Oil delivery	80 ÷ 145 gpm	95 ÷ 185 gpm
Maximum rotation oil flow	13 gpm	16 gpm
Maximum rotation pressure	1950 psi	1950 psi
Maximum clamping force at tip	240 tons	275 tons
Clamping force class	1500 tons	2500 tons
Length	161 in	190 in
Jaw width	30 in	32 in
Jaw opening	37.5 in	43.3 in
Max jaw depth	38.5 in	44 in
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 hammer	HP 16000 - HP 25000	HP 16000 - HP 25000

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#### Carrier key



Compact excavator



Miniloader



Backhoe loader



Wheeled excavator



Tracked excavator



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
	0.8 in	1.4 in	2 in	2.8 in	3.6 in	4.2 in	4.6 in	5.7 in
	2.5 in*	8 in*	10.5 in*	13 in*	17.5 in*	19.5 in*	22.5 in*	28 in*
	0.8 in	1.6 in	2 in	2.5 in	3.5 in	4 in	4.5 in	5.5 in
	0.25 in**	0.4 in**	0.5 in**	0.75 in**	0.8 in**	0.9 in**	1 in**	1.25 in**
	5 IPE***	8.5 IPE***	13 IPE***	16 IPE***	18 IPE***	20 IPE***	22 IPE***	24 IPE***
	4 HEA	8 HEA	10 HEA	12 HEA	13.5 HEA	14 HEA	16 HEA	18 HEA
	6 I BEAM (W)	10 I BEAM (W)	13 I BEAM (W)	16 I BEAM (W)	18 I BEAM (W)	22 I BEAM (W)	26 I BEAM (W)	31 I BEAM (W)
 JIS G3192	4x4x0.8	8x8x2	10x10x3	12x12x4	16x12x4	18x12x5	20x12x5	24.5x12x5

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

\*\*Blade thickness affect the shear's capacity to pierce sheet metal in various applications

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

# Features of Indeco 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 (151 lb/yd) 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]**.

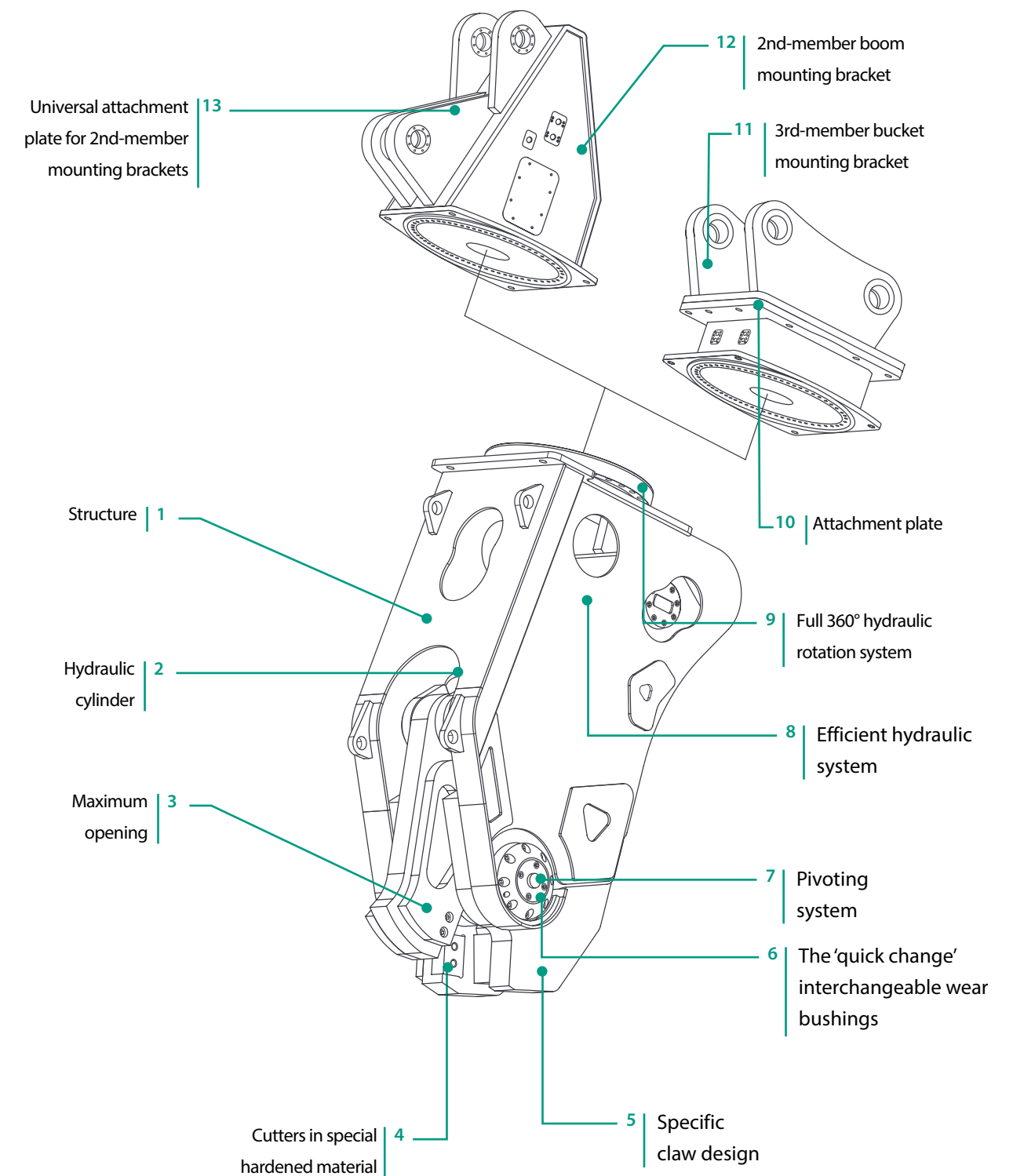
Full 360° hydraulic rotation system **[9]** for greater flexibility and speed. Equipped with relief valves for flow and pressure, it guarantees greater reliability, durability, and positioning precision.

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 is compatible with all excavators.

## 2nd and 3rd member configuration





Technical Data	IRC 20	IRC 30
Type of carrier	<b>4</b> <b>5</b>	<b>5</b>
Min. excavator weight in 2nd member (boom-mounted) configuration	35200 lbs	44000 lbs
Min. excavator weight in 3rd member (bucket-mounted) configuration	44000 lbs	66000 lbs
Attachment operating weight 2nd member	6490 lbs	9650 lbs
Attachment operating weight 3rd member	6160 lbs	9240 lbs
Maximum working pressure	5150 psi	5150 psi
Oil delivery	53 ÷ 93 gpm	66 ÷ 106 gpm
Maximum rotation oil flow	7 gpm	8 gpm
Maximum rotation pressure	1620 psi	1620 psi
Maximum clamping force at tip	430 tons	550 tons
Clamping force class	770 tons	1000 tons
Length	93 in	104 in
Jaw width	26 in	29 in
Jaw opening	8 in	9 in
Max jaw depth	8.3 in	9.1 in
Closure time	2.5 ÷ 4 s	3 ÷ 5 s
Opening time	1.5 ÷ 2.5 s	2 ÷ 3 s
 Rail (<300HB)	40 lb/ft	47 lb/ft
Compatibility of attachment plate with hammer	HP 3000 - HP 4000	HP 10000

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#### Carrier key



Compact excavator



Miniloader



Backhoe loader



Wheeled excavator



Tracked excavator



IRC 3rd member

Common configurations on the following models: IRC 20 - IRC 30

# 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.

## 3 | Special 2nd member universal mounting bracket

Indeco has designed our second-member mounting system to be flexible, extremely strong, long-lasting and suitable for a variety of different carriers. Digitally-machined true surfaces ensure perfect alignment of the rotating



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components and all service items are easily accessed via the four access panels.

## 4 | Mounting bracket for 3rd member configuration

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

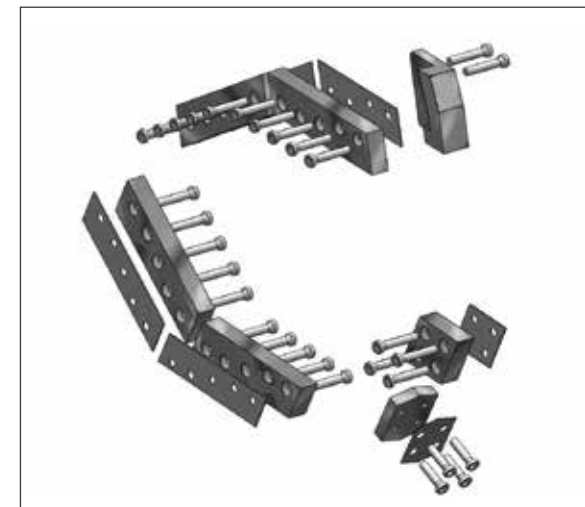
## 5 | ISS blades

ISS blades are made with special heat-treated steels, using an exclusive Indeco technology which optimizes their performance and durability.

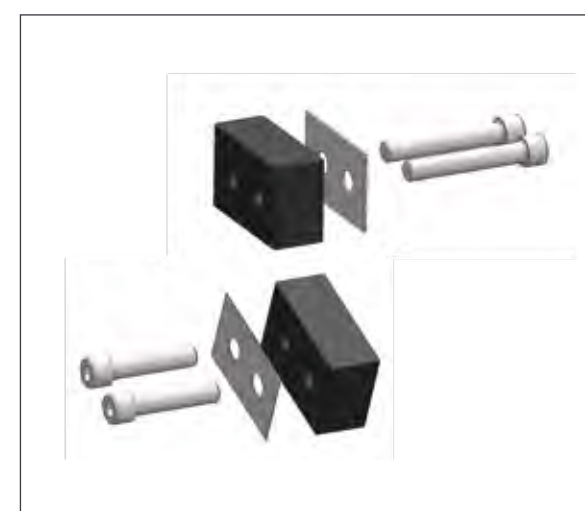
## 6 | IRC blades

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



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# Application areas

		ISS			IRC		
		F	II	III	II	III	
 <p><b>Demolition &amp; Renovation</b></p>	<b>Light demolition</b>						
	• Demolition of masonry structures						
	• Brickwork						
	• Natural stone						
	• Renovation of interiors						
	• Autoclaved aerated concrete						
	<b>Demolition of non-reinforced concrete structures</b>						
	• Primary demolition of lightweight and standard concrete						
	• Primary demolition of heavyweight concrete						
	• Wall elements						
	• Secondary demolition						
	<b>Composite steel &amp; concrete structure demolition</b>						
	• 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						
<b>Demolition of metallic buildings and structures</b>			○	○			
• Demolition of refineries			○	○			
• Cutting of metal and steel structures			○	○			
• Cutting steel girders/beams	○	○	○				
• Cutting reinforcements		○	○				
<b>Sorting and loading</b>							
• Sorting							
• Loading							
• Waste handling							
• Site clean-up							
<b>Pavement demolition</b>							
• Asphalt							
• Concrete							
• Composite surfaces							
 <p><b>Recycling</b></p>	<b>Processing</b>		○	○	○		
	• Scrap material processing		○	○	○		
	• Cutting tires		○	○	○		
	• Processing rail cars		○	○	○		
	• Processing cars, trucks and general automotive		○	○	○		
	• Cutting tanks		○	○	○		
	• Cutting of railway tracks, tramway rails, and underground rails					○	○
	<b>Handling and sorting</b>			○	○		
	• Scrap material handling			○	○		
	• Scrap material sorting			○	○		
	• Urban waste						
	• Industrial waste						
• Wood and tires							
<b>Downsizing and sorting</b>							
• Material downsizing and sorting in recycling quarries							
<b>Recycling of ferrous material</b>		○	○	○	○	○	
• Recycling of ferrous material		○	○	○	○	○	

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