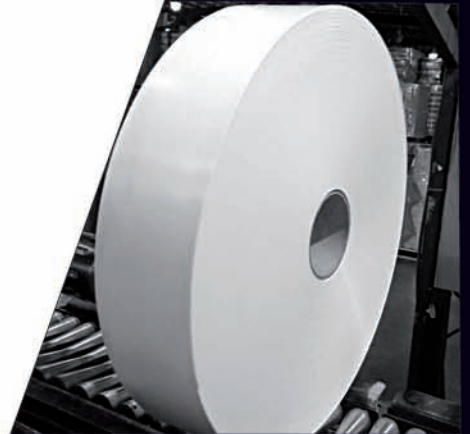


LONGITUDINAL SLITTING SYSTEMS AND MODULES

**ELIO CAVAGNA** s.r.l.

**HELIOS**®

*When slits meets style*



**HELIOS**  
DESIGN

OUR PRODUCTION

# Serie J

Type **J2-40** • **J3L-48** • **J3H-75**

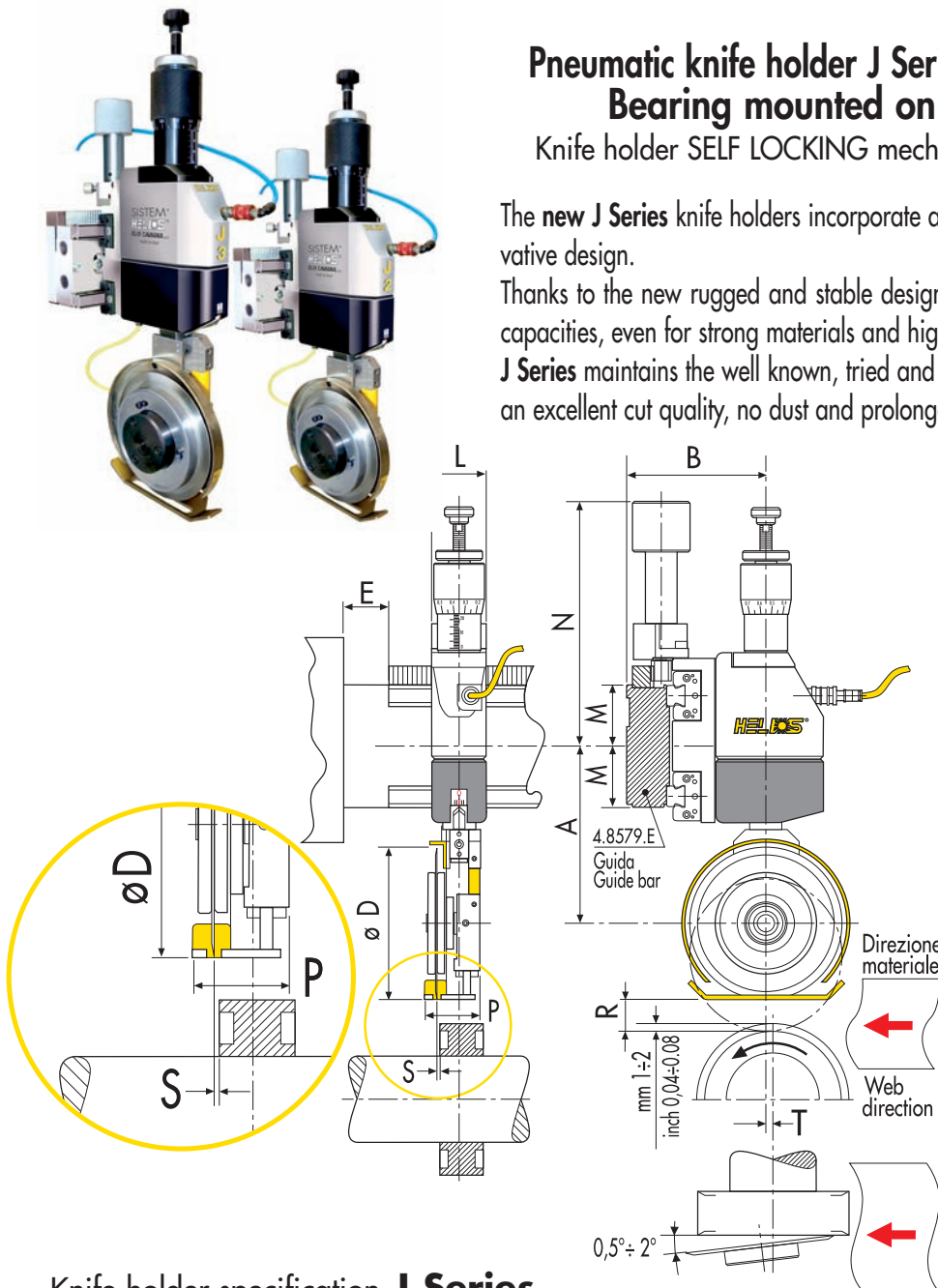
**Pneumatic knife holder J Series for longitudinal shear cutting.**  
**Bearing mounted on precision ground slides.**

Knife holder SELF LOCKING mechanism Automatic knife SAFETY GUARD

The new **J Series** knife holders incorporate all high performance features in a simple and innovative design.

Thanks to the new rugged and stable design **J Series** knife holders can achieve higher cutting capacities, even for strong materials and high operating speeds.

**J Series** maintains the well known, tried and tested **SOFT-CUT / STILO** system which guarantees an excellent cut quality, no dust and prolonged knife life.



**J Series** knife holders are **PATENTED** and incorporate innovative features as standard, such as:

1	Inbuilt self locking brake.
2	Guide bar with rack and double slide rail.
3	Quick manual positioning utilising slides / bearings and pinion knob
4	Precise micrometer knife depth adjustment.
5	Cutting angle adjustment.
6	Graduated scale for cutting angle setting.
7	SOFT-CUT: flexible knife head for precise setting of cutting pressure
8	Quick removal knife head.
9	Automatic knife safety guard.
10	Bayonet knife locking system.
11	Interchangeability with razor cutting.

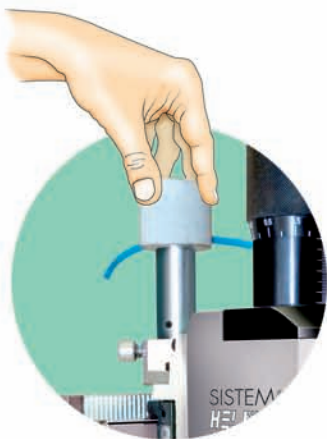
## Knife holder specification **J Series**

STILO TYPE	GUIDE TYPE	A min inch	A max inch	B inch	D inch	E inch	L inch	M inch	N inch	P inch	R inch	S inch	T inch	Min. slit. width inch	Max. paper cutting capacity gr/m <sup>2</sup>	Max. plastic film capacity inch	Top speed capacity FPM
<b>J2-40</b>	4.8579.E	4.8	5.79	3.82	3.54÷4.1÷4.72	2.36	1.5	1.67	6.7	1.57	0.47	0.08	0.197	1.58	400	0.024	3,609
<b>J3L-48</b>	4.8579.E	6.41	8.0	4.6	5.12÷5.9	3.94	1.89	1.67	7.64	1.89	1.18	0.10	0.315	1.97	800	0.06	6,562
<b>J3H-75</b>	4.8579.E	6.41	8.0	4.6	5.12÷5.9÷7.09÷7.9	3.94	2.2	1.67	7.64	2.95	1.18	0.14	0.315	3.15	2,000	0.12 (*)	9,842

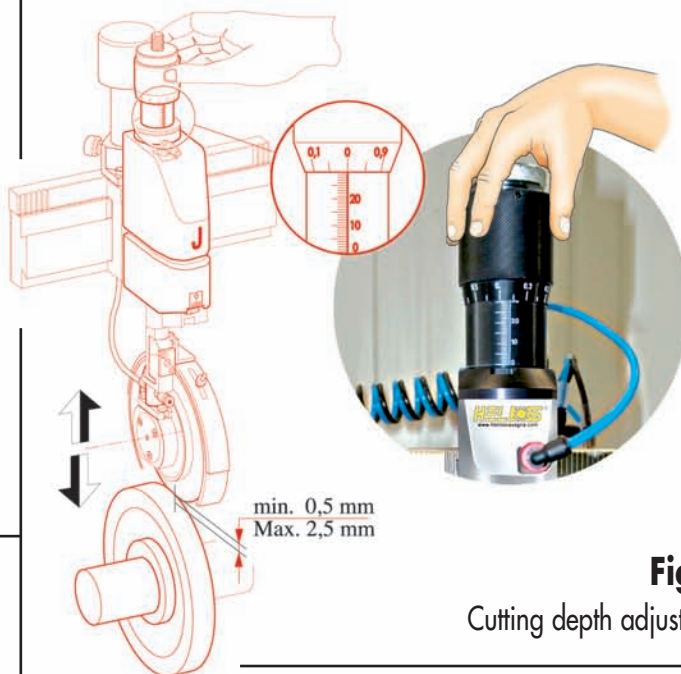
STILO TYPE	GUIDE TYPE	A min mm	A max mm	B mm	D mm	E mm	L mm	M mm	N mm	P mm	R mm	S mm	T mm	Min. slit. width mm	Max. paper cutting capacity gr/m <sup>2</sup>	Max. plastic film capacity mm	Top speed capacity m/min
<b>J2-40</b>	4.8579.E	122	147	97	90÷105÷120	60	38	42,5	170	40	12	2	5	40	400	0,6	1100
<b>J3L-48</b>	4.8579.E	163	203	117	130÷150	100	48	42,5	194	48	30	2,5	8	50	800	1,5	2000
<b>J3H-75</b>	4.8579.E	163	203	117	130÷150÷180÷200	100	48	42,5	194	75	30	3,5	8	80	2000	3 (*)	3000

(\*) for materials thicker than 3mm please ask for confirmation by Helios

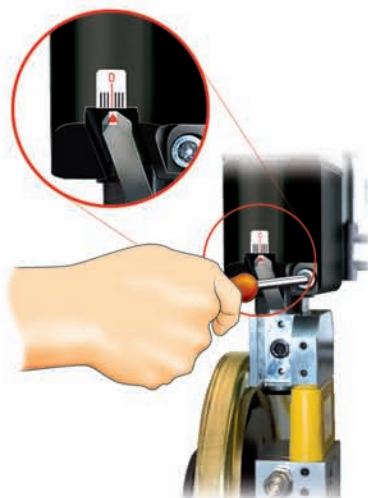




**Fig.1:**  
Easy and fast blade positioning through knob and runners

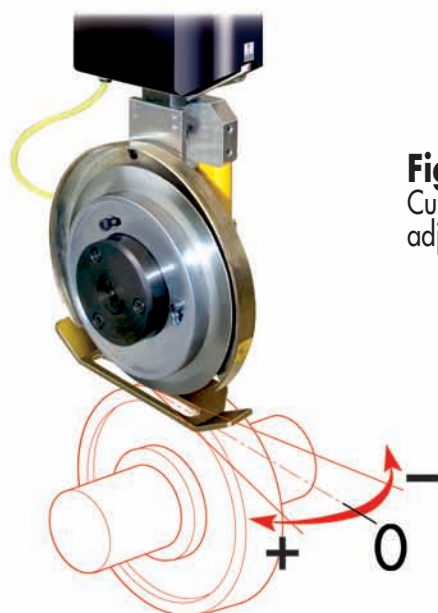
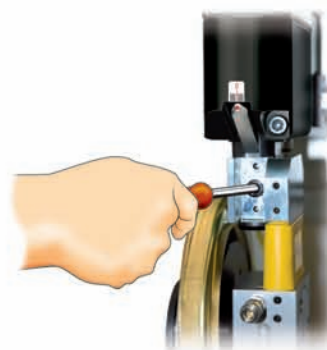


**Fig.2:**  
Cutting depth adjustment



**Fig.3:**  
Screw unlocking for cutting angle adjustment

**Fig.5:**  
Screw unlocking for head disassembly



**Fig.4:**  
Cutting angle adjustment



**Fig.6:**  
180° Head Rotation

# Serie J

## Type **J3B • J2B**

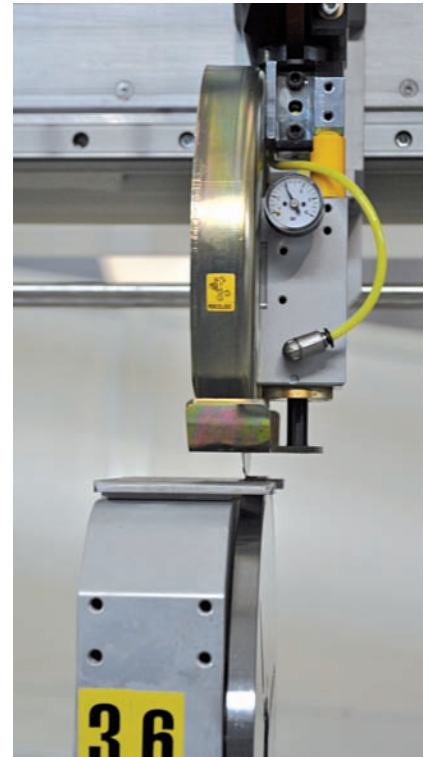
New pneumatic knifeholder **series J2B-J3B** for longitudinal shear cut.

The **J3B** is a blade holder version equipped with mechanisms for moving the blade along with the Bottom Knives, e.g.: **FAST-MAN** and **AUTOMATIC** trim elimination systems; in all these solutions blade and Bottom Knife move in lockstep. This allows to achieve:

- A fixed blade holder with exact regulation of the cutting pressure, due to the possibility of reading the exerted force on the gauge;

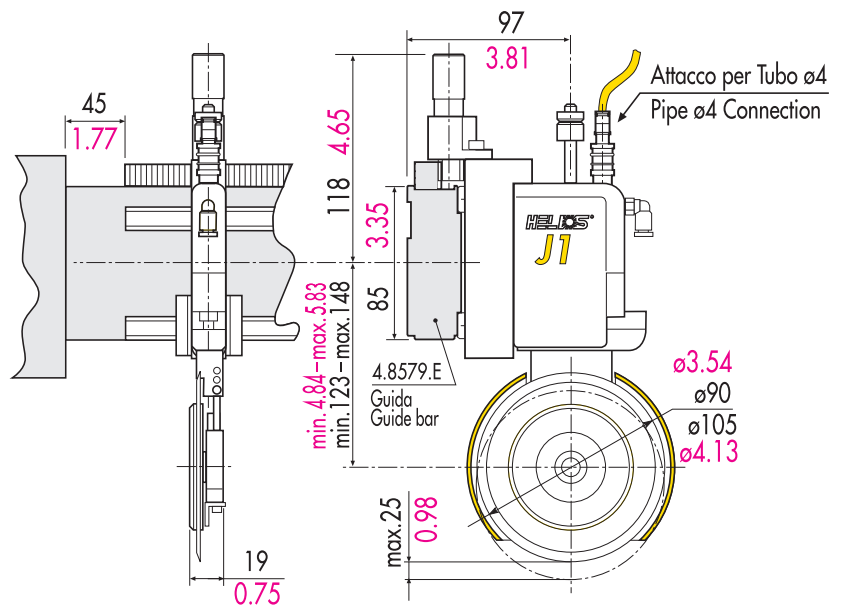
As a consequence, the following is also achieved:

- Precision in adjusting the side pressure of the blade.
- The adjustment always stays the same and constant over time;
- There can not be calibration errors, hence increasing the blade lifetime.



*New Style... and New Technology*

**Patented pneumatic knife holder J1 Series for longitudinal shear cutting.  
Bearing mounted on precision ground slides.**

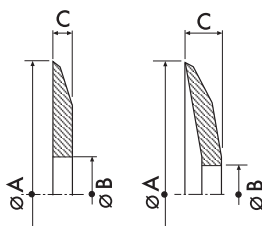


Type	Min cutting width inch	Max paper cutting capacity gr/m <sup>2</sup>	Max plastic films cutting capacity inch	Max speed FPM
<b>J1-19</b>	<b>0.79</b>	<b>300</b>	<b>0.02</b>	<b>1.830</b>

Type	Min cutting width inch	Max paper cutting capacity gr/m <sup>2</sup>	Max plastic films cutting capacity inch	Max speed FPM
J1-19	0.79	300	0.02	1,830

Type	Min cutting width mm	Max paper cutting capacity gr/m <sup>2</sup>	Max plastic films cutting capacity mm	Max speed m/min
J1-19	20	300	0.5	600

## SHEAR CUT TOP KNIVES



	inch	mm
J1-J2	Ø 3.543 x 2.362 x 0.047	Ø 90 x 60 x 1,2
	Ø 4.133 x 2.362 x 0.047	Ø 105 x 60 x 1,2
	Ø 4.724 x 2.362 x 0.047	Ø 120 x 60 x 1,2
J3L-48 J3H-75	Ø 5.118 x 3.149 x 0.06	Ø 130 x 80 x 1,5
	Ø 5.91 x 3.149 x 0.99	Ø 150 x 80 x 2,5
J3H-75	Ø 7.09 x 3.149 x 0.157	Ø 180 x 80 x 4
	Ø 7.874 x 3.149 x 0.157	Ø 200 x 80 x 4

Type	A inch	B inch	C inch	Type	A mm	B mm	C mm
T 69	2.755	1.574	1.181	T 69	70	40	30
T 72	3.301	1.771	0.924	T 72	77	45	25
T 100	3.543	2.362	0.787	T 100	90	60	20
T 101	3.543	2.362	1.181	T 101	90	60	30
T 200	4.133	2.362	0.787	T 200	105	60	20
T 201	4.133	2.362	1.181	T 201	105	60	30
T 300	4.133	3.149	0.787	T 300	105	80	20
T 301	4.133	3.149	1.181	T 301	105	80	30
T 400	4.724	3.149	1.574	T 400	120	80	40
T 500	5.118	3.149	1.574	T 500	130	80	40
T 504	5.118	3.937	1.180	T 504	130	100	30
T 505	5.118	3.937	1.574	T 505	130	100	40
T 600	6.299	4.000	1.574	T 600	160	101,6	40
T 600C	6.299	4.724	0.197	T 600C	160	120	5
T 601	6.299	3.937	1.574	T 601	160	100	40
T 602	5.905	4.000	1.574	T 602	150	101,6	40
T 603	6.299	4.724	1.574	T 603	160	120	40
T 604	6.299	5.118	1.574	T 604	160	130	40
T 606	5.905	3.937	1.574	T 606	150	100	40

Technical drawing of a stepped shaft. The drawing shows a shaft with a central section of diameter  $\varnothing B$  and a total length  $L$ . The shaft has two steps, each with a diameter  $D$ . The distance between the centers of the two steps is  $C$ . The total height of the shaft is  $\varnothing A$ . The drawing includes a section line and a break symbol.

**DIMENSIONS UPON  
REQUEST**

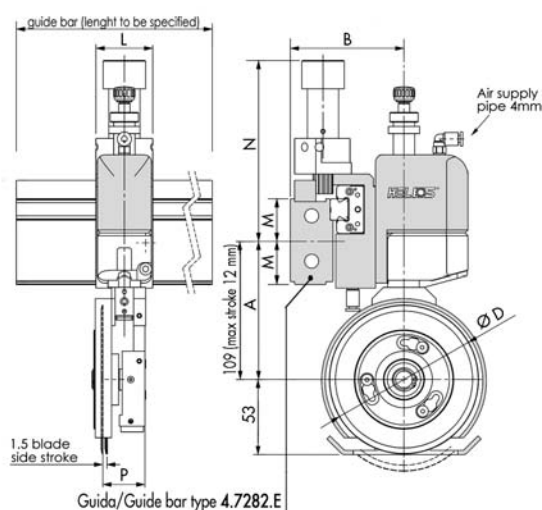


# Serie JS2-JA2

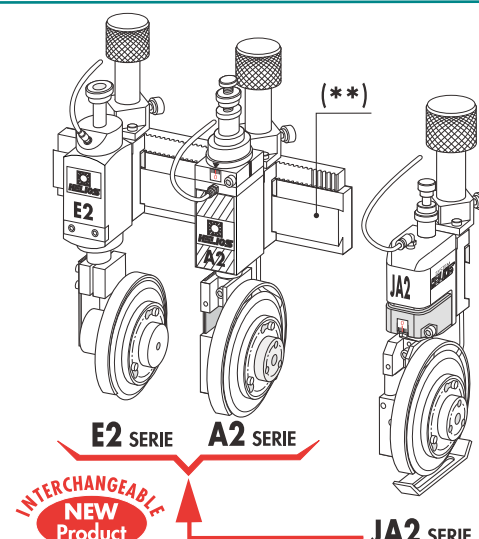
Interchangeable with old series

E2-A2-S2

Mounting example, JS2 Series interchangeable with S2 Series



...the E2 Series and A2 Series blade holders may also be replaced by the new JA2 Series blade holder



(\*\*) 4.296.E guide type; in case of replacement, please ask Helios for availability

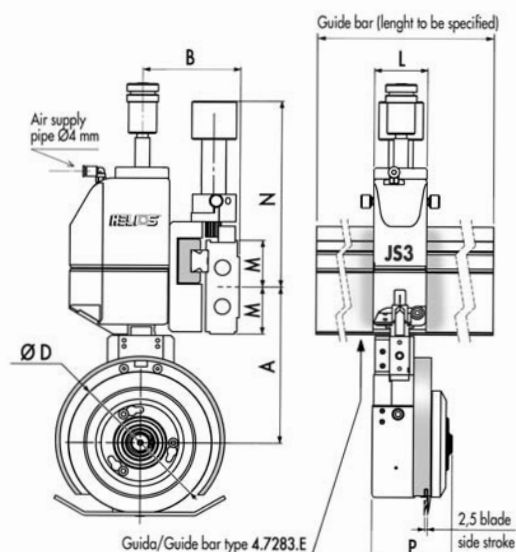
STILO TYPE	Guide Type	A min mm	A max mm	B mm	D mm	L mm	M mm	N mm	P mm	Min. cutting lenght mm	Max. paper cutting capacity gr/m <sup>2</sup>	Max. plastic films cutting mm	Max. speed m/min
JS2-40C	4.7282	97	1109	80	90÷105	40	30	128	29,7	40	400	0,6	600

# Serie JS3-JA3

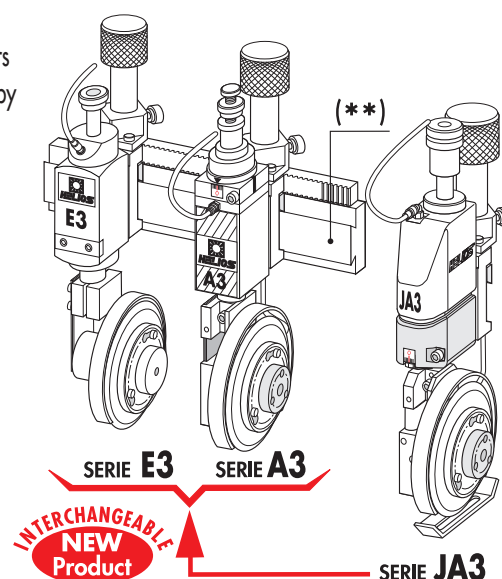
Interchangeable with old series

E3-A3-S3

Mounting example, JS2 Series interchangeable with S2 Series



...the E3 Series and A3 Series blade holders may also be replaced by the new JA3 Series blade holder

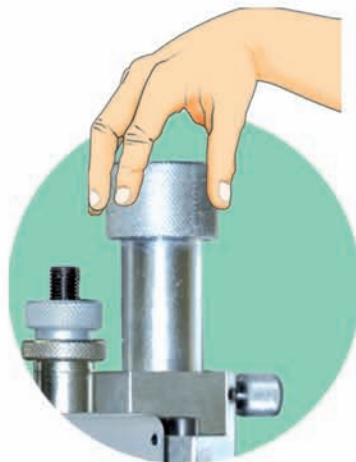


(\*\*) 3.111.E guide type; in case of replacement, please ask Helios for availability

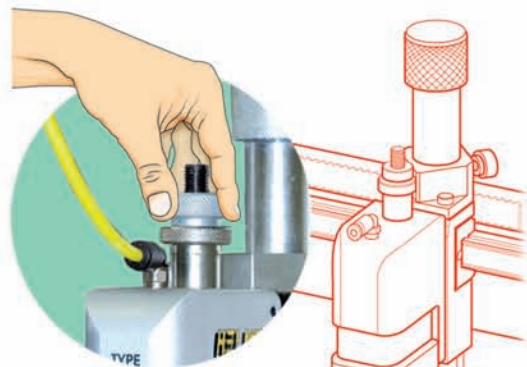
STILO TYPE	Guide Type	A min mm	A max mm	B mm	D mm	L mm	M mm	N mm	P mm	Min. cutting lenght mm	Max. paper cutting capacity gr/m <sup>2</sup>	Max. plastic films cutting mm	Max speed m/min
JS3-48	4.7283.E	142	167	88,5	130÷150	48	42,5	170	48	50	800	1,5	1300
JS3-75	4.7283.E	142	167	88,5	130÷150 180÷200	48	42,5	170	75	80	2000	2(*)	1500

(\*) for materials thicker than 2mm please ask for confirmation by Helios

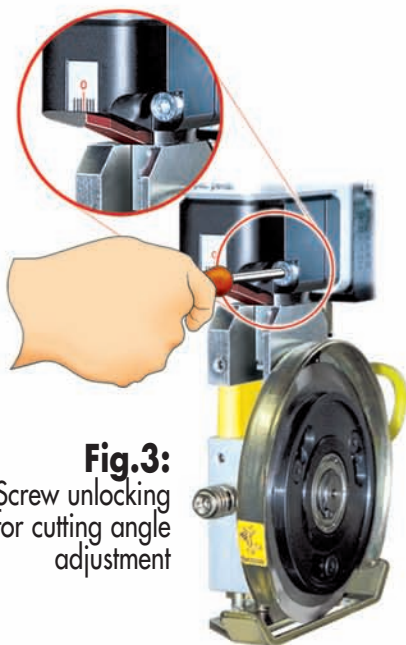
## EASY SETTING & MAINTENANCE



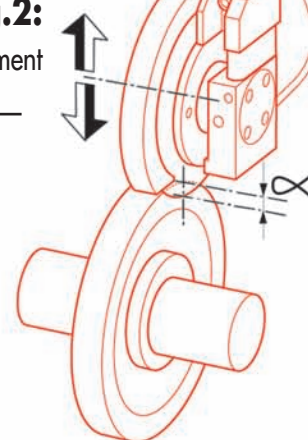
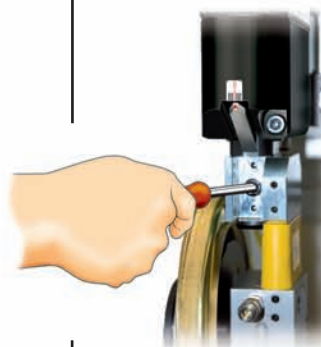
**Fig.1:**  
Easy and fast blade  
positioning through  
knob and runners



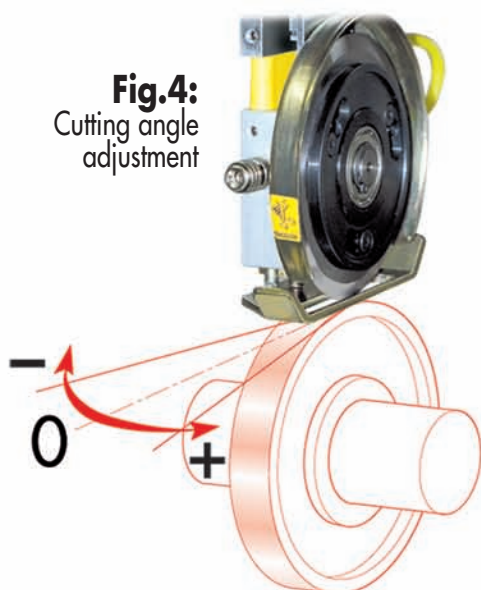
**Fig.2:**  
Cutting depth adjustment



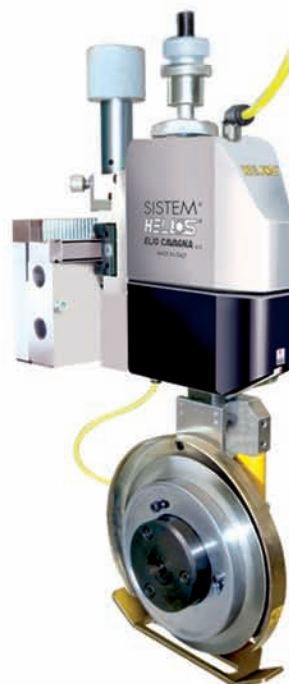
**Fig.3:**  
Screw unlocking  
for cutting angle  
adjustment



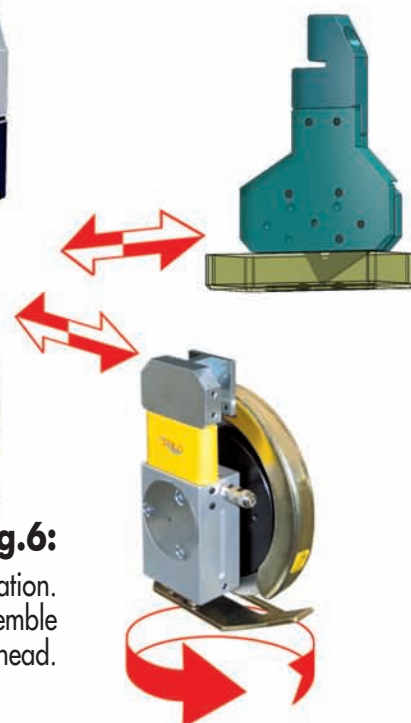
**Fig.5:**  
Screw unlocking  
for head disassembly



**Fig.4:**  
Cutting angle  
adjustment



**Fig.6:**  
180° Head Rotation.  
Possibility to assemble  
razor head.



# Serie J

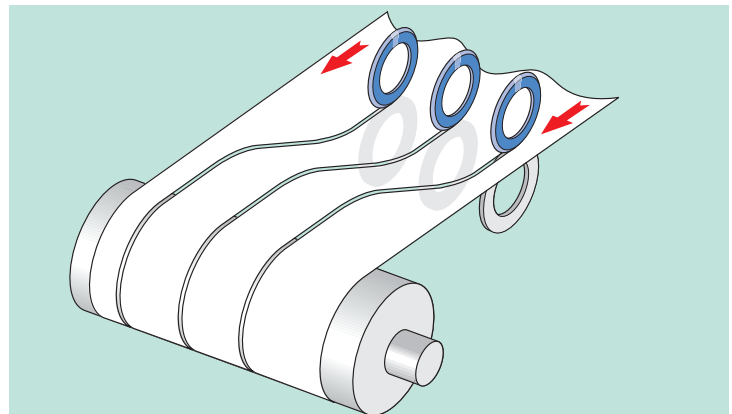
## CUTTING MODULE FOR **AUTOMATIC** FORMAT CHANGE

### TRV NON-STOP System

The patented **TRV system** has been used for many years in various different applications and utilises industry proven Helios technology.

This automatic system was designed to allow:

- **Format changes** with material in line.
- **Format changes** during cutting, i.e. during production
- Simultaneous positioning of all cutting groups to centre



As you can see from schematic drawing, this solution allows you to move the blades without disengaging the top and bottom knife, consequently without breaking the material or stopping the line.

In short:

- **productivity increase** (there are no machine stops except to replace worn knives);
- **waste reduction** (machine is not stopped during format changes so normal production continues);
- **production processes speed up** (If line is continuous, there's no need to slow it down or stop it).

The patented **TRV system** achieves high precision positioning and long lasting life, even when the machine is not regularly or properly cleaned. **TRV** requires no specific maintenance.

### HMB System

The Helios **HMB system** has been designed to be compact and versatile so that it can be assembled on small machines or in areas with limited overall space. Thanks to its clever design, **HMB** has a minimum cutting width of between 30 and 50 mm (1.18 inch and 1.97 inch).

The main feature is easiness of use. The system is very user friendly and does not need specific maintenance, except ordinary cleaning.

**FORMAT CHANGE can be carried without breaking the material.**

This reduces waste as the material does not need to be removed from the machine to change the slit pattern.



### Software Helios



**Helios software** has been designed to be predictive and instant. The operator Interface is simple to use and requires only basic training to enter data so that everybody can quickly learn how to use it. Working formats (slit width configurations) can be saved and recalled later via their name or number. The recalled format can then be instantly loaded and set.

Software can be individually customised upon request.

#### TRV System

Main features:

##### Format change:

material in line:	Yes
during cutting production:	Yes

Minimum cutting width:	100 mm	3.94 inch
Maximum cutting width:	5600 mm	220.47 inch
No. cutting units:	no limit	
Positioning accuracy:	+/-0.2 mm	+/-0.0079inch

##### Top speed capacity:

shaft drive:	1100 m/min	3,610 FPM
independent motor drive	2600 m/min	8,530 FPM

#### HMB System

Main features:

##### Format change:

material in line:	Yes
during cutting production:	No

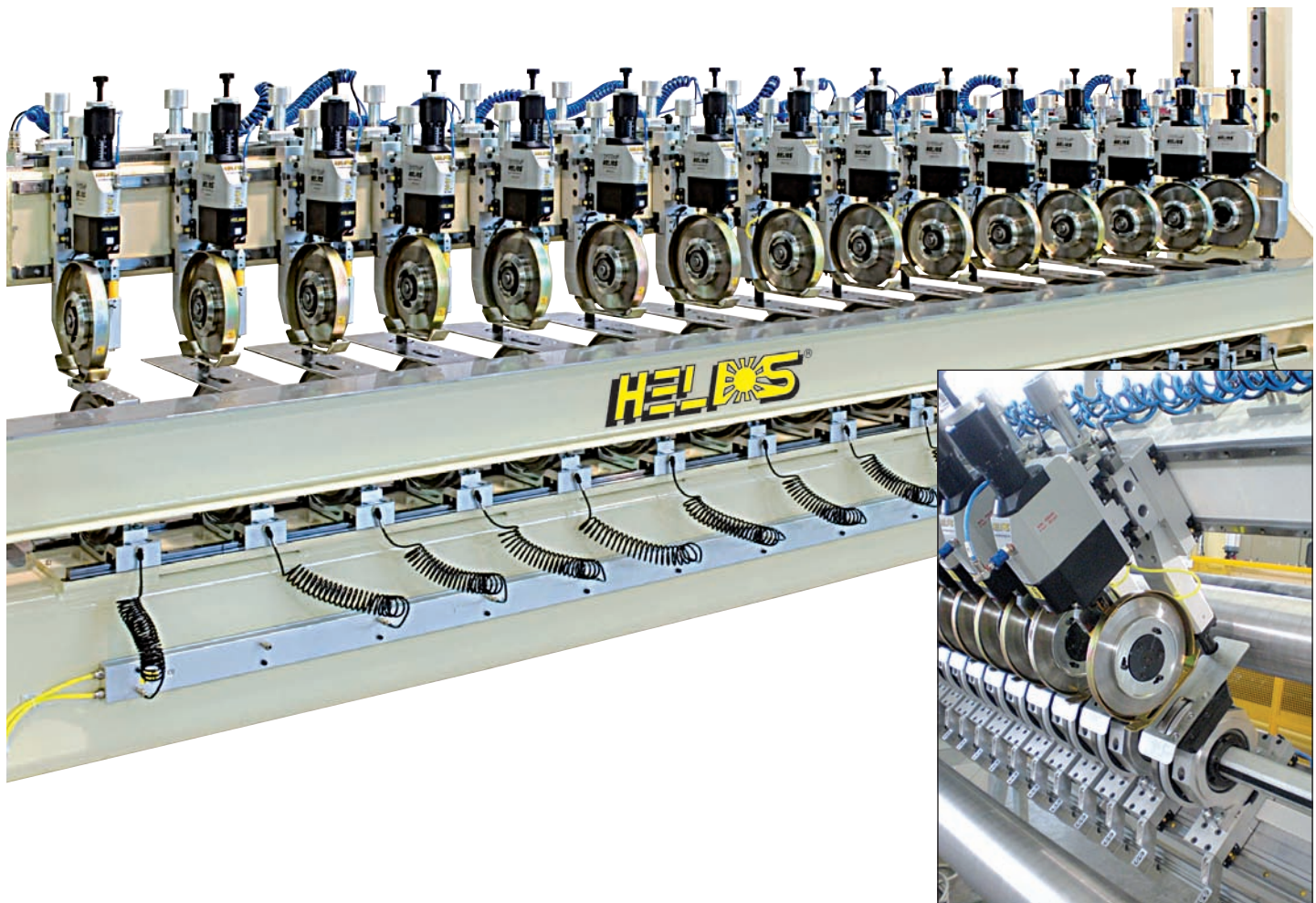
Minimum cutting width:	30÷50 mm	1.18÷1.97 inch
Maximum cutting width:	8000 mm	314.96 inch
No. cutting units:	no limit	
Positioning accuracy:	+/-0.2 mm	+/-0.2 inch

##### Top speed capacity:

shaft drive:	1100 m/min	3,610 FPM
independent motor drive	2600 m/min	8,530 FPM



# SHEAR CUTTING MODULES **FAST-MAN**



## TECHNICAL FEATURES

• Minimum cutting width:	50 mm	1.97inch
• Max. cutting width:	no limit	
• Max. no of cutting units:	no limit	
• Top speed shaft driven system:	1100 m/min	3,610 FPM
• Top speed on independent motors driven system:	2600 m/min	8,530 FPM
• Format change with material in line:	No	
• Optional automatic positioning:	Yes	

**FAST MAN** means **QUICK FORMAT CHANGES** in manual mode

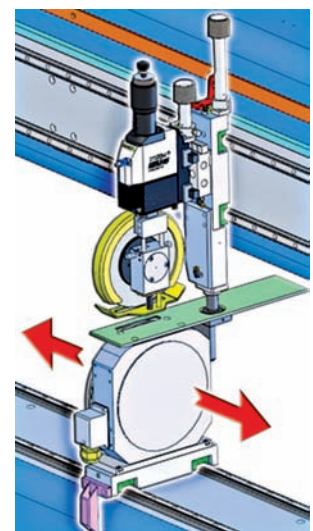
These are carried out during machine stop without material in the cutting area, i.e. web interrupted. This is the ideal solution for new rewinders as well as old ones that need to be retrofitted.

**FAST MAN** is the best solution to reduce downtimes drastically, in manual mode.

### WHAT'S FAST MAN?

- it's **QUICK** cutting format measures change, blades and bottom knives move together;
- it's **QUICK** blades & bottom knives are independent;
- it's **FAST**, the operator must only position blades & bottom knives to desired measure, no other settings are required;
- it's **TIME SAVING**, only 2-3 minutes are required to position 20 cutting units;
- it's **HIGH PERFORMING**, thanks to independent motors You can reach high speed and minimum cutting width down to 50 mm (1.97 inch)
- it's **FLEXIBLE**, this system can be integrated with an automatic format change system.

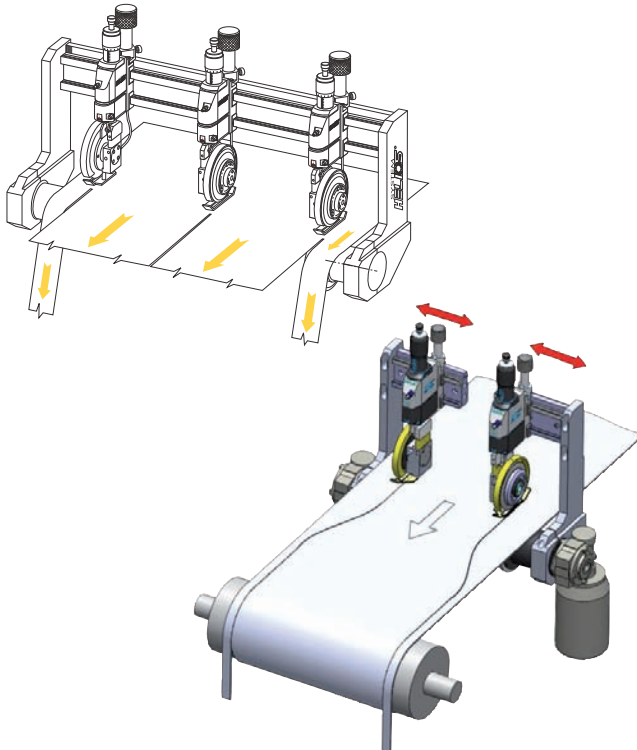
**The ideal solution for cardboard and tissue rewinder.**



**New Style... and New Technology**

# TRIMS AND CENTRAL CUTTING

## STJ-TYPE, SCISSOR CUTTING FOR **TRIMS** AND **CENTRAL CUTTINGS** WITH MANUAL **NON-STOP** DISPLACEMENT



**WITHOUT STOPPING THE PRODUCTION**, change operated while the blades are cutting. They can be supplied with various combinations.

- 1) **TRIMS only;**
- 2) **TRIMS + CENTRAL CUTTINGS**
- 3) **CENTRAL CUTTINGS only**

Ideal solutions for extruders or wherever the format must be changed with no downtime.

It is also possible to move manually the cuts from the machine, so that the operator can always work safely and without wasting time.

It can be enhanced by the addition a display knob for viewing the cutting positions, in such a way as to:

- Move the cutting units with no downtime.;
- Move the cutting units without having to remove any material;
- Move the cutting units in complete safety.
- Fine positioning unit thanks to digital.

### TECHNICAL FEATURES

• Min. cutting width:	50 mm	1.97inch
• Max. cutting width:	no limit	
• No. of cuts:	6 (ask for confirmation if higher)	
• Speed with transmission shaft:	1100 m/min	3,610 FPM
• Speed with independent motors:	2600 m/min	8,530 FPM
• In-line material format change:	Yes	
• Format change during production:	Yes	



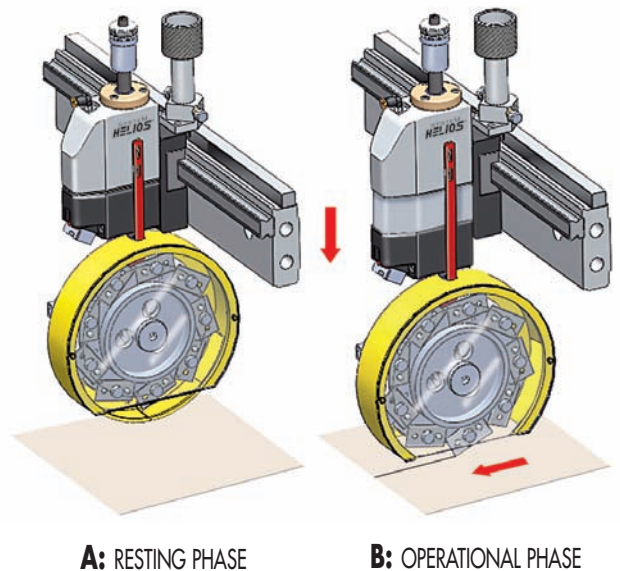
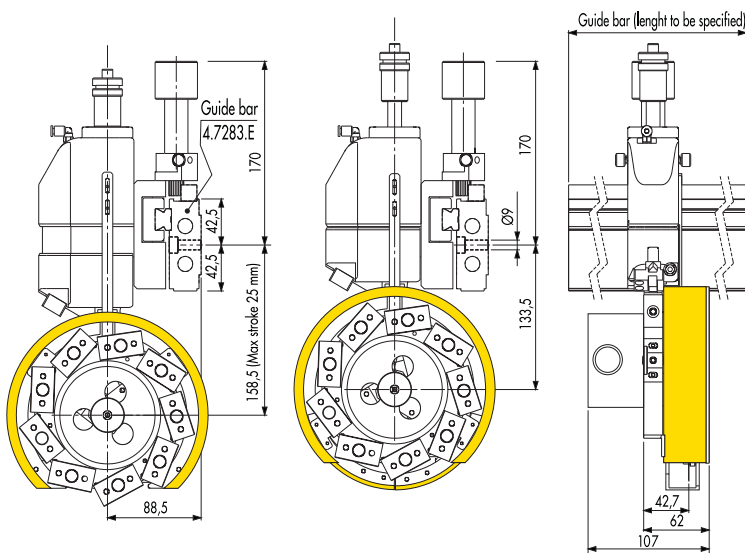
*New Style... and New Technology*

# RAZOR BLADE

## Multi-blade cutting WITH PATENTED, AUTOMATIC SAFETY PROTECTION

### TYPE TL 107 SELF-LOCKING

The TL 107 type, MULTI-BLADE CUTTING system is recommended for cutting plastic films up to 25 $\mu$  thickness.  
For cutting plastic materials beyond 25 $\mu$ , shear cutting system is preferable.



## Single blade cutting for high-thickness materials WITH PATENTED, AUTOMATIC, SAFETY PROTECTION

### TYPE J3 RB SELF-LOCKING

For cutting high-thickness, plastic materials up to 2mm, the RB, single-blade cutting system is preferable.

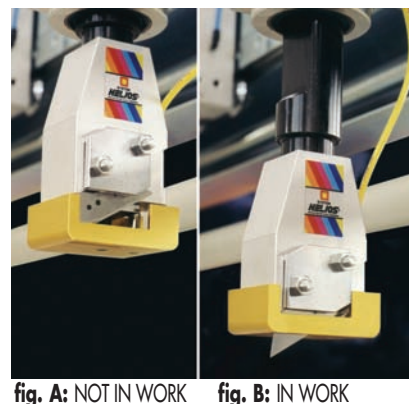
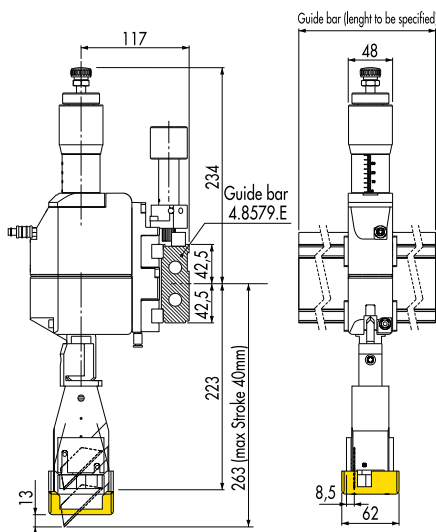


fig. A: NOT IN WORK fig. B: IN WORK



# PRESSURE CUTTING

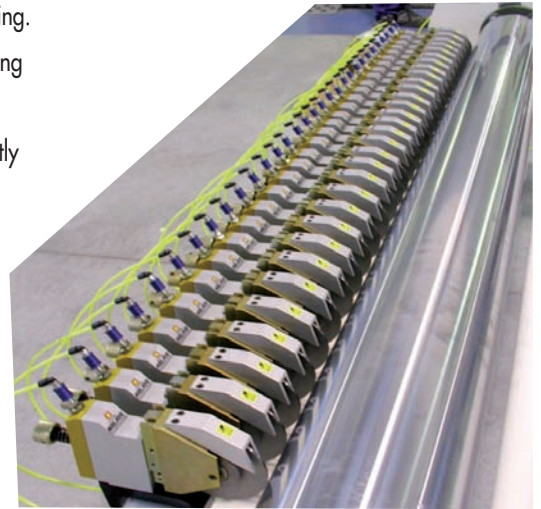
The **PRESSURE CUTTING** system is a traditional one, used for perforation-, half- and groove-cutting. Pressure cutting is used where high speed is not paramount, cutting material are soft and when cutting pressure is weak.

With direct contact between the blade and the counter-blade cylinder, blade wear is high and directly proportional to the pressure employed.

In the event of the cutting and production qualities are determining factors a shear cutting system, such as J serie, is necessary.

To obtain optimum scoring a special blade is used and air pressure must be carefully regulated.

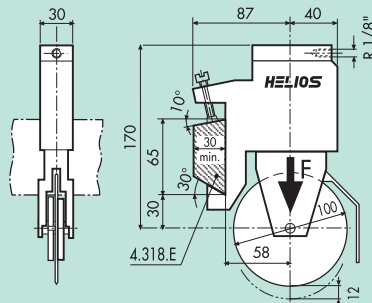
Helios can satisfy all needs, by supplying shear- or half-cutting systems or modules.



## TYPE EK-30

Screw manual blocking with trapezoidal guide

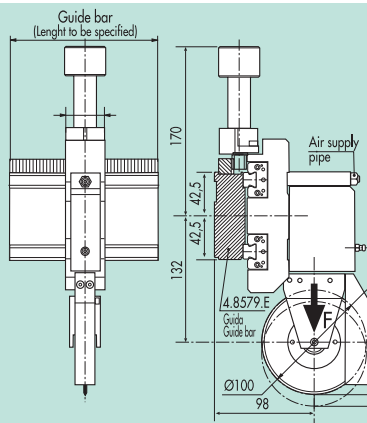
- Suggested maximum speed: 400 m/min
- Max. cutting capacity: 600 g/m<sup>2</sup>
- STROKE: 30Kg with 6 bar pressure



## TYPE EKJ30

Pneumatic blocking on linear guide. Knob for movement

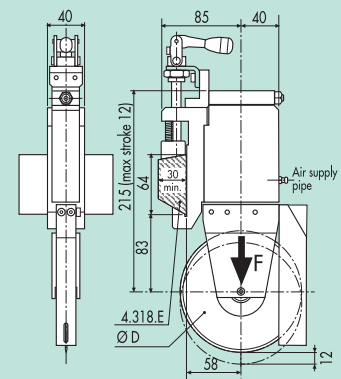
- Suggested maximum speed: 400 m/min
- Max. cutting capacity: 600 g/m<sup>2</sup>
- STROKE: 30Kg with 6 bar pressure



## TYPE EK30-QR

Level blocking on trapezoidal guide

- Suggested maximum speed: 400 m/min
- Max. cutting capacity: 600 g/m<sup>2</sup>
- STROKE: 30Kg with 6 bar pressure

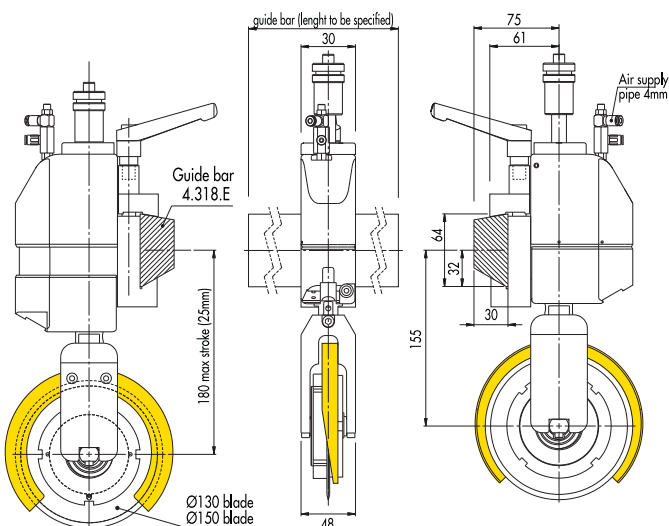


## TYPE JCS3 TP48

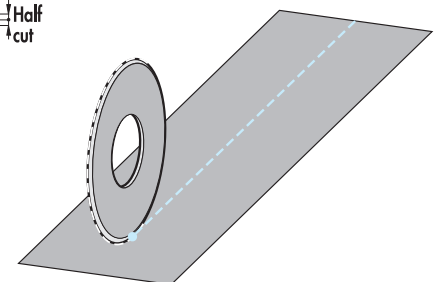
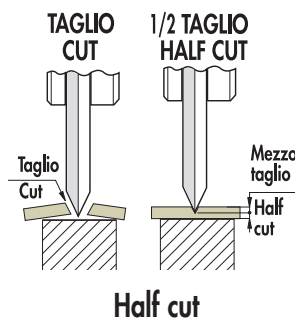
PNEUMATIC KNIFEHOLDER FOR PRESSURE CUT

Interchangeable with old Series EPS 48 and EPS 75

Max. cutting capacity: 400 m/min - STROKE: 90 Kg with 6 bar pressure



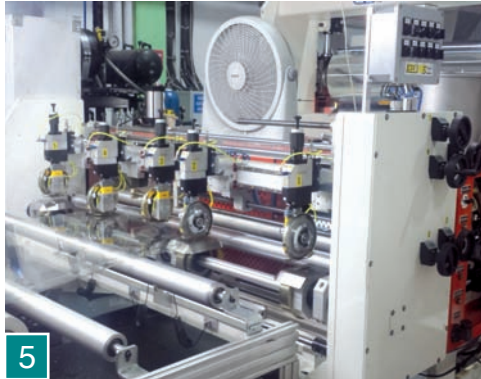
## WORKING MODALITY OF PRESSURE CUTTING



# RETROFIT



1



5



8



2

*HELIOS Elio Cavagna srl* are specialists in the retrofit of slitting systems to a wide variety of converting machines such as winders, extruders, calendar lines & coaters etc. Thanks to our extensive application knowledge and wealth of experience built up over many years, we can:

**Modify old machines.**  
Return to original cutting efficiency.



9



3

**Increases production**  
When our 'Fast man' or automatic cutting modules are installed.



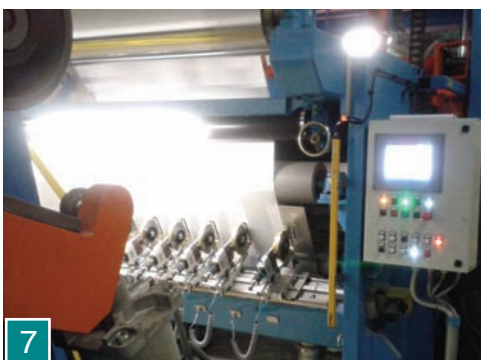
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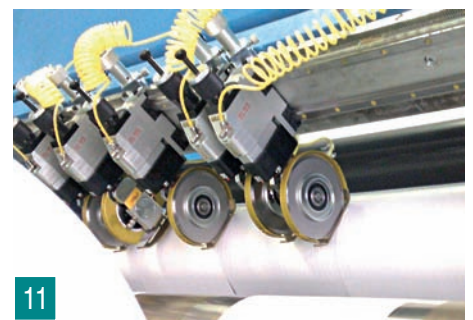
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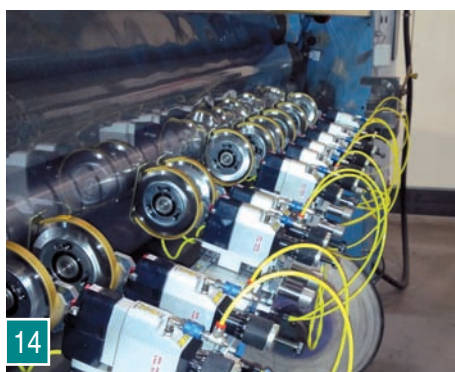
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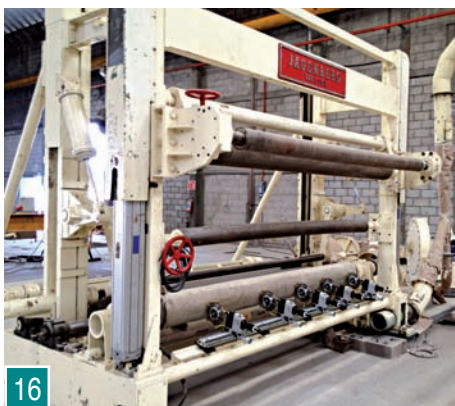


# RETROFIT



## I N N O V A T I O N

*With our innovative cutting solutions we can help to solve your cutting problems.*





[illegible]

# New Style... and New Technology



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