



Top[®]

AUTOMAZIONI

BAR FEEDERS & AUTOMATIONS

**NO MORE REASONS
TO WAIT**





www.topautomazioni.com



BAR FEEDERS & AUTOMATIONS

Products Catalogue

Vers. 1.2

***NO MORE REASONS
TO WAIT***



TOP Automazioni

OVER 40 YEARS OF HISTORY



The history of TOP Automazioni, as we know it today, is quite recent.

We are not the “oldest” Italian company specialized in designing and manufacturing of automatic bar feeders. But we are proud of being unique in the world, thanks to the innovation of our products achieved by years of work and research. But how have we arrived up to here? Till the point of being awarded as the “most innovative company in Italy” in 2005?

Our journey began long time ago, in the 70s, we were just a small subcontracting company, named Torneria Automatica Bargellini.

We would work for third parties: the workshop had several automatic lathes and the workers pushed hard to best meet the needs of the customers.

However, day by day we were realizing that the market's conditions were changing.

The business' pace was accelerating progressively: delivery time was getting shorter and orders bigger. In that environment the workloads began to be unbearable, due to the increasing requirements of faster mechanical execution and further raised quality level. It was the perfect time to find a solution that could accelerate delivery times, lighten the workloads and ensure an excellent service.

The company had already designed, prior to the auto-

matic loader, another product for its internal needs: a special spindle for drills. But this time it was different, we realized we had into our hands **something that would have revolutionized the way the turning operators commonly operated.**

The system we developed had a totally innovative way of conceiving the work of the loader: it automatically adjusted the bar feeder to the bar stock diameter just **by operating on the PLC**, canceling the change-over time. So much fast that it was not believed real.

From that time and for the following years, our automatic bar feeders have been fine-tuned. In the conventional bar feeders operations, the time spent to adjust to different diameters took hours, while with our bar feeders it was possible to do an even better job in **only 1 minute.**

In the year 2000, a system born to solve a specific need within the workshop therefore assumes such importance to lead to the establishment of the **TOP Automazioni company.** The project is wider developed and in some years the bar feeders become 100% automatic.

In 2001 the innovative system is finally patented.

It is a new way of understanding the bar feeders for CNC lathes, which soon finds fertile ground abroad: in 2003 our products successfully reached the American market, when they were already distributed in many European countries.

Our success key? In addition to the cost of the machine, workshops that purchase traditional bar feeders normally have to incur extra costs for additional accessories (for example guide channel, bushings, spindle reductions and pushers) to adapt to the whole workable bar diameters.

On the contrary, the Top Automazioni bar feeders, thanks to their technology, do not require any further equipment, as they are precisely set to the different bar stock size by the PLC input.

In the year 2020, the new Arm and Rolling production lines, the latest challenges of Top Automazioni, will also find their place in the 21.000 square meters of the new manufacturing plant (settled in the year 2018).

Arm and **Rolling** are Top Automazioni's universal robotic solutions with integrated storage, for loading/unloading components, configurable with all CNC machines

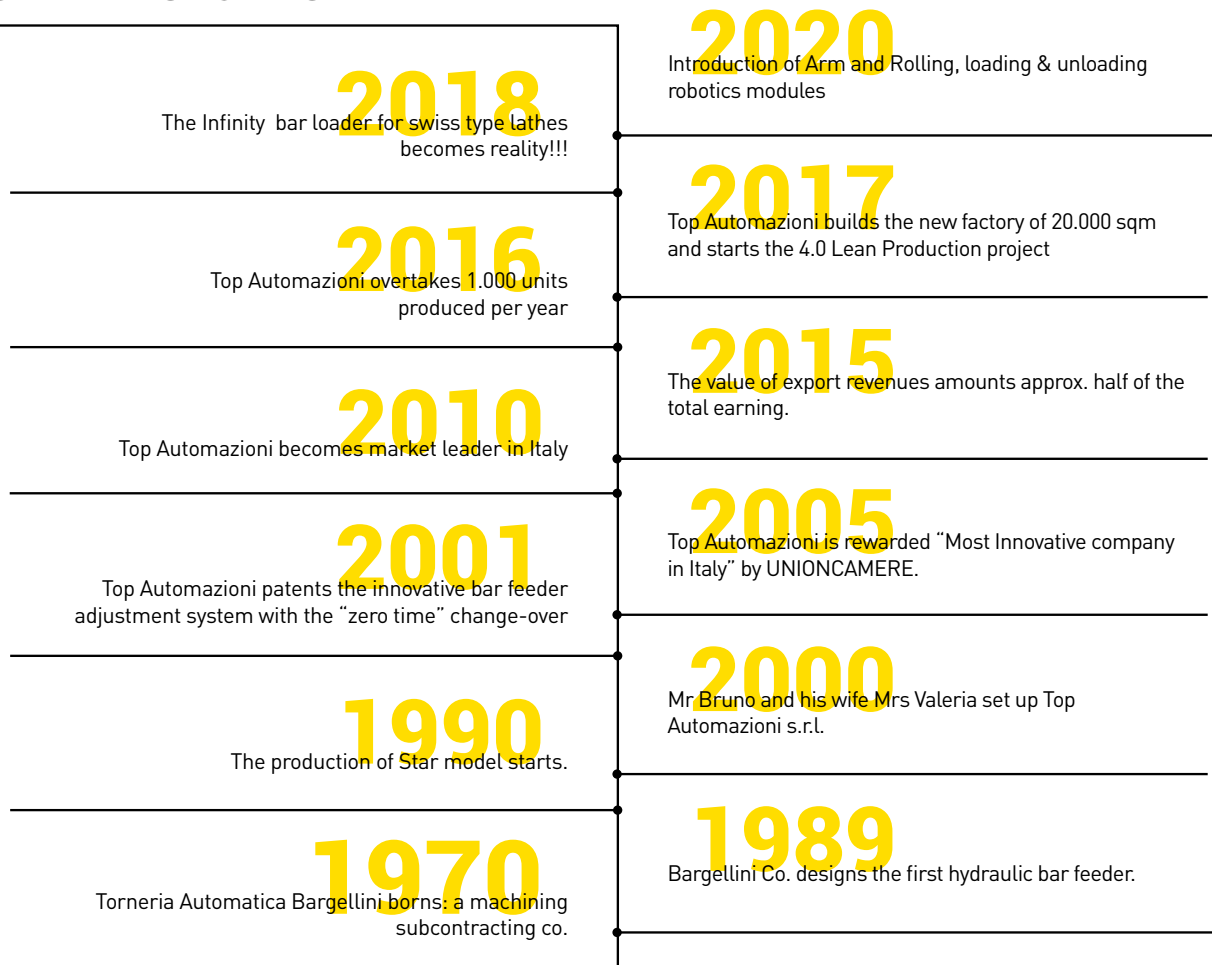
such as lathes, machining centers, grinders, etc.

Capable of storing considerable amount of parts similar to shafts or flanges, castings or logs, **they guarantee many hours of processing** with efficiency and on time, with advantages in terms of profitability beyond normal expectations.

The mix of decades of experience in mechanical processing combined with the knowledge of the most innovative electromechanical technologies, partnerships with international companies such as Fanuc and Schunk, and high-value collaborations with local companies, have allowed the birth of a project that is bringing unexpected results.

Our goal has always been to allow our customers to increase their profits by reducing unproductive times, thanks to our intense and constant research in the field of automation.

TOP MILESTONES



**LEADER IN ITALY,
WORLDWIDE
ADMIRER**





PRODUCTS LINE

FIXED-HEADSTOCK

20. X-FILES-S

Ø 10 - 100 mm / 0.39" - 3.93"



24. FUSION

Ø 6 - 52 mm / 0.23" - 2.04"



32. BETA

Ø 8 - 52 mm / 0.31" - 2.04"



SLIDING-HEADSTOCK

16. INFINITY

Ø 3 - 45 mm / 0.11" - 1.77"



SHORT LOADER

36. MAGIC

Ø 8 - 100 mm / 0.31" - 3.93"



UNLOADER

28. RETURN SPEED

Ø 10 - 80 mm / 0.39" - 3.14"



TOP AUTOMAZIONI ADVANTAGES

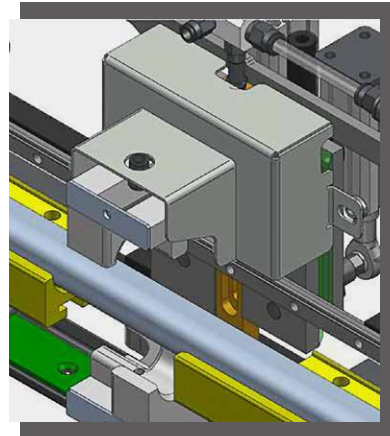
BENEFIT #1

LOWER COSTS

The patented self-adjustable guide bushes system developed by Top Automazioni will allow customers to run the entire bar stock diameter capacity of the bar feeder with **only one (1)** set of guide bushes. The self-adjusting guide bushes are adjustable directly from HMI panel (mm by mm).

The bushes are made in vulcanized rubber (Vulkollan).

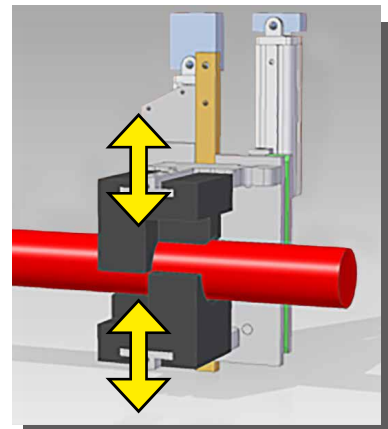
This patented system is a standard feature for the following bar feeders:
X-FILES-S, FUSION, INFINITY.



BENEFIT #2

READY IN 1 MINUTE

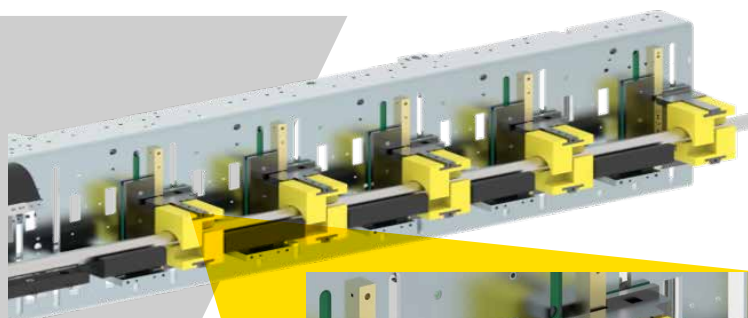
AUTOMATIC SETUP. The series of adjustable guide bushes are set to the different diameter by the HMI panel in only ONE MINUTE.



BENEFIT #3

PERFECT BAR CONTROL

Our bar feeders model X-FILES-S, FUSION and INFINITY are equipped with five to nine (quantity will change based on bar feeder length) self-centering guide bushes module. So, we're constantly supporting both the bar-pusher and the bar every 250 mm / 9.84" during cutting process.



Infinity



**SUITABLE FOR SLIDING-HEAD CNC LATHES
WITH SPINDLE CAPACITY FROM
3 mm (0.11") TO 45 mm (1.77")**

**SELF-ADJUSTING GUIDE
CHANNEL VIA THE HMI PANEL**

**NO ADDITIONAL GUIDE CHANNEL
SETS REQUIRED**

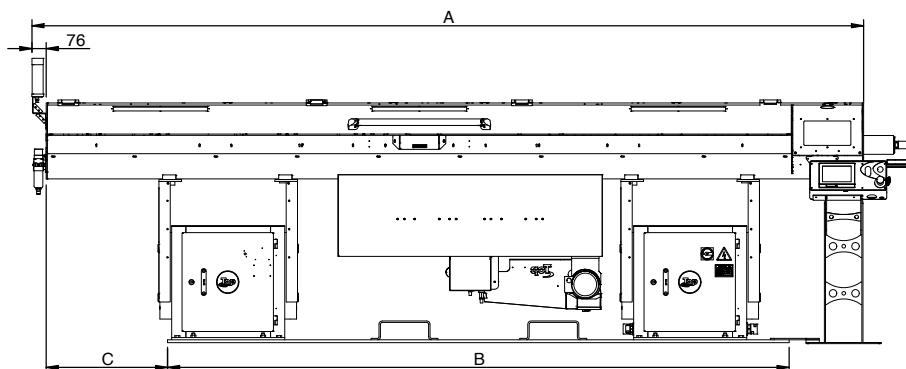
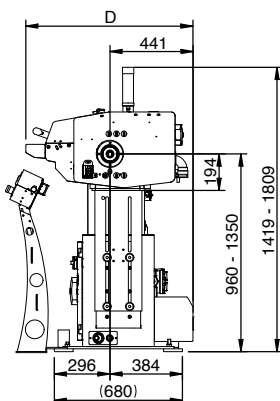
**AVAILABLE IN 3200 mm (10.5')
AND 4100 mm (13') BAR
LENGTH CAPACITIES**



BAR FEEDER LAYOUT

SERIES	A	B	C
3200	4416	3300	645
4100	5414	4300	645

STORAGE	D
Single level / Ratchet	887
Multi level	1256





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TECHNICAL DATA

∅ ROUND BARS
3 mm - 45 mm
0.11" - 1.77"

⬡ HEXAGONAL BARS
3 mm - 39 mm
0.11" - 1.53"

⊠ SQUARE BARS
3 mm - 32 mm
0.11" - 1.25"

↔ BAR LENGTH

1200 mm - 3200 mm / 47.24" - 125.98"
1200 mm - 4100 mm / 47.24" - 161.41"

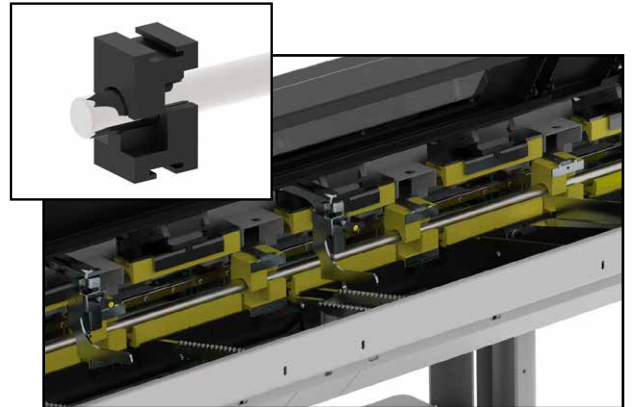
⌚ MAX FEED SPEED
60 m/min - 196.85'/min

↔ MAX REMNANT LENGTH
450 mm / 17.71"

⚙️ AIR PRESSURE REQUIRED
6.5-7.5 bar

SELF ADJUSTING GUIDE CHANNEL

Thanks to the Top Automazioni Patent, INFINITY features a self-adjusting guide channel (mm per mm) managed by the PLC. The guide channel is entirely made in vulcanized rubber (Vulkollan). The bars are dipped in an oil bath while processing.



EXTRA CLAMPING TOP® SYSTEM

According to the specific turning conditions (with or without front guide bush), we can install on the bar feeder's head an additional support, self-adjustable and self-centring Top Automazioni patented). The device improves the bar clamping, increasing the process's performances.



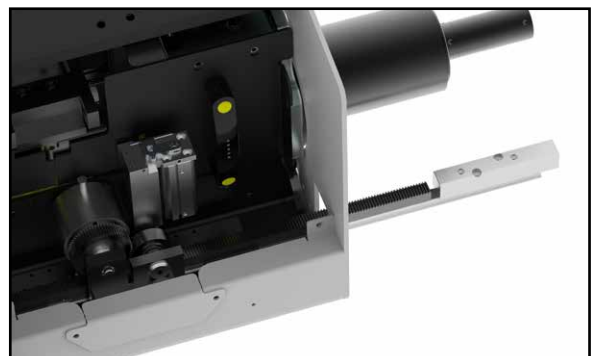
REMNANT EXTRACTION

INFINITY offers the remnant management by a rear extraction performed thanks to a hidden self centering extractor (Top Automazioni patented) that does not require any manual adjustment.



TRACKING SYSTEM

INFINITY features a mechanical tracking system performed by means of a pneumatic clutch.



AUTOMATIC MANAGEMENT

The INFINITY bar feeder is completely managed by a touch screen PLC interacting with a Brushless motor and a digital pneumatic valves system which controls speed, thrust and all the automations. From the PLC the operator can shift from one diameter to another one IN 60 SECONDS, simply entering the intended diameter on the keyboard.



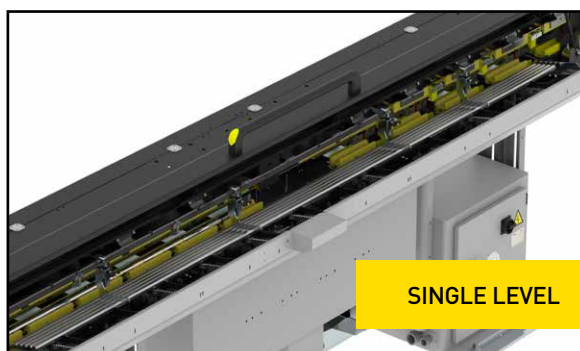
BAR STORAGE

INFINITY can be equipped with three different loading storages:

1) **SINGLE LEVEL** 12° angled magazine with 265 mm (10,43") loading capacity

2) **MULTI LEVEL** magazine, featuring 4 different levels, each with 250 mm (9.84") carrying capacity

2) Optional **RATCHET** magazine, with 265 mm (10.43") loading capacity, recommended for small diameters (Ø3 mm - Ø4 mm - Ø5 mm - Ø6 mm / Ø 0.11" - Ø 0.15" - Ø 0.19" - Ø 0.23")



SINGLE LEVEL



MULTI LEVEL



RATCHET

X-Files-S



**SUITABLE FOR FIXED-HEAD CNC LATHES
WITH SPINDLE CAPACITY FROM
10 mm (0.39") TO 100 mm (3.93")**

**SELF-ADJUSTING GUIDE CHANNEL
VIA THE HMI PANEL**

**NO ADDITIONAL GUIDE CHANNEL
SETS REQUIRED**

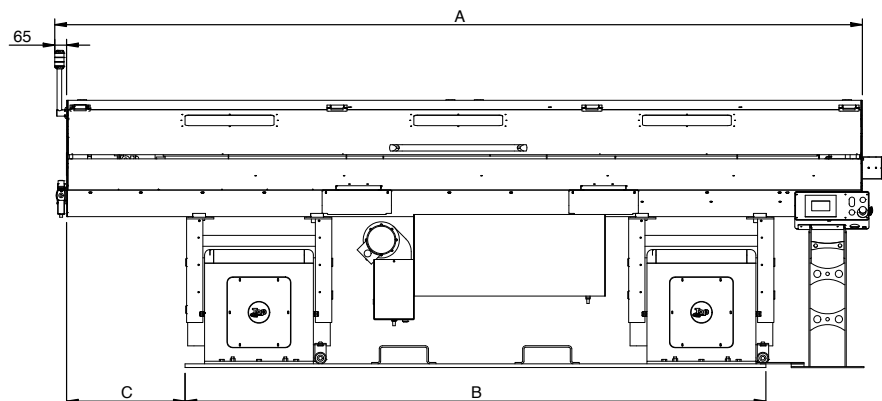
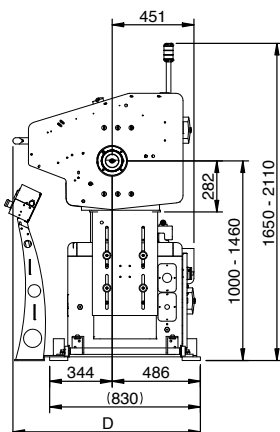
**AVAILABLE IN 2100 mm (6.5'),
3200 mm (10.5'), 4100 mm
(13') AND 6100 mm (20')
BAR LENGTH CAPACITIES**



BAR FEEDER LAYOUT

SERIES	A	B	C
2100	3531	3000	533
3200	4450	3200	653
4100	5470	4200	759
6100	7544	6200	850

STORAGE	D
Single level	1032
Multi level	1262
Low Single Rack L.700 mm	1642
Bundle	1796





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TECHNICAL DATA

∅ ROUND BARS
10 mm - 100 mm
0.39" - 3.93"

⬡ HEXAGONAL BARS
10 mm - 87 mm
0.39" - 3.42"

⊠ SQUARE BARS
10 mm - 71 mm
0.39" - 2.79"

↔ BAR LENGTH

1200 mm - 3200 mm / 47.24" - 125.98"
1200 mm - 4100 mm / 47.24" - 161.41"
1200 mm - 6100 mm / 47.24" - 240.15"

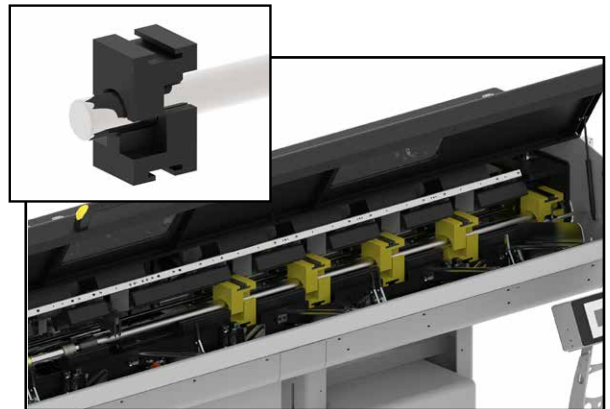
⌚ MAX FEED SPEED
30 m/min - 98.42'/min

↔ MAX REMNANT LENGTH
300 mm - 11.81"

⚙️ AIR PRESSURE REQUIRED
6.5-7.5 bar

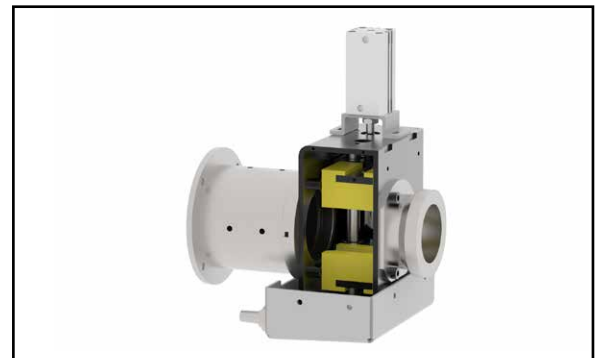
SELF ADJUSTING GUIDE CHANNEL

Thanks to the Top Automazioni Patent, X-FILES-S features a self-adjusting guide channel (mm per mm) managed by the PLC. The guide channel is entirely made in vulcanized rubber (Vulkollan). The bars are dipped in an oil bath while processing.



EXTRA STEADY BLOCK

On demand it's possible to apply to the X-FILES-S an external steady block system, suitable for the small diameter bars. The steady block, in fact, will self-activate for any diameter below 20 mm (0.78").



REMNANT EXTRACTION

X-FILES-S offers two different remnant managements:

- 1) Rear extraction performed by means of a self centering extractor
- 2) Front ejection



REPOSITIONING SYSTEM

X-FILES-S doesn't require the spindle liner, but it's anyway equipped with a rail system that enables axial 600 mm (23.62") or radial 500 mm (19.68") displacement (alternative option), helping the lathe servicing.



AUTOMATIC MANAGEMENT

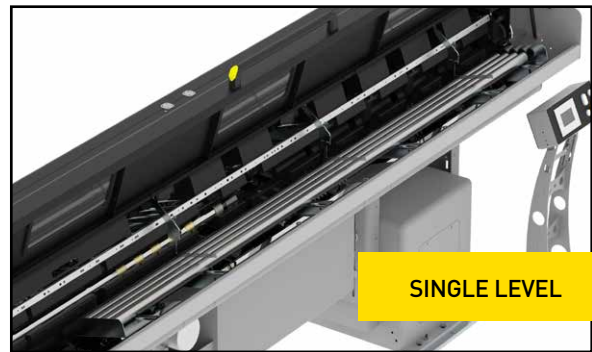
The X-FILES-S bar feeder is completely managed by a touch screen PLC interacting with a Brushless motor and a digital pneumatic valves system which controls speed, thrust and all the automations. From the PLC the operator can shift from one diameter to another one IN 60 SECONDS, simply entering the intended diameter on the keyboard.



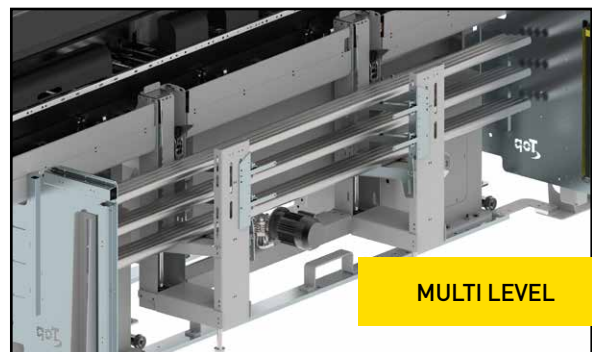
BAR STORAGE

The X-FILES-S can be equipped with 4 different loading storages:

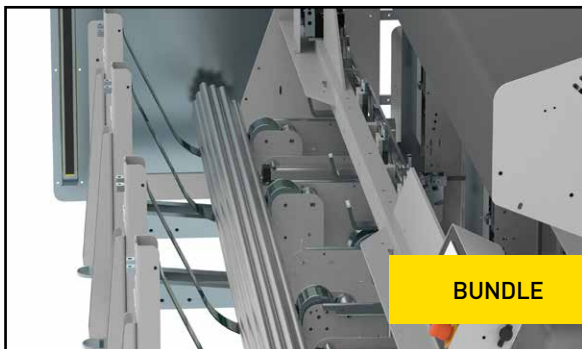
- 1) **SINGLE LEVEL** magazine, featuring a single storage with 300 mm (11.81") carrying capacity
- 2) **MULTI LEVEL** magazine, featuring 3 different levels, each with 300 mm (11.81") carrying capacity
- 3) **FORK LIFTER** magazine, featuring a 700 mm (27.55") double fork loader.
- 4) **BUNDLE**, which supports up to 2 ton (4.409 lbs) of weight



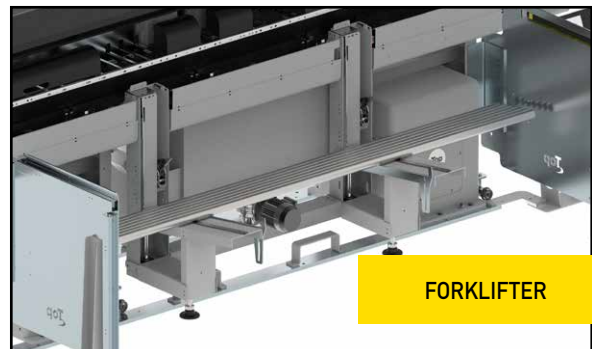
SINGLE LEVEL



MULTI LEVEL



BUNDLE



FORKLIFTER



**SUITABLE FOR FIXED-HEAD CNC LATHES
WITH SPINDLE CAPACITY FROM
6 mm (0.23") TO 52 mm (2.04")**

**SELF-ADJUSTING GUIDE CHANNEL
VIA THE HMI PANEL**

**NO ADDITIONAL GUIDE CHANNEL
SETS REQUIRED**

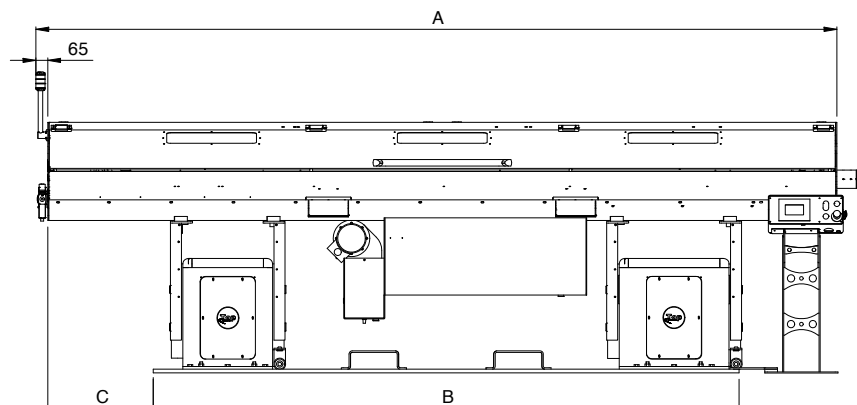
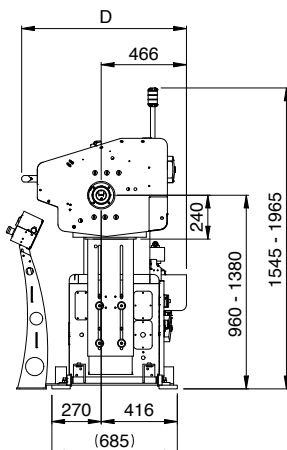
**AVAILABLE IN 2100 mm (6.5'),
3200 mm (10.5'), 4100 mm
(13') AND 6100 mm (20')
BAR LENGTH CAPACITIES**



BAR FEEDER LAYOUT

SERIES	A	B	C
2100	3445	3000	412
3200	4375	3200	576
4100	5380	4200	481
6100	7381	6200	597

STORAGE	D
Single level	900
Multi level	1222
Low Single Rack L.700 mm	1610
Bundle	1756





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FUSION

TECHNICAL DATA

∅ ROUND BARS
6 mm - 52 mm
0.23" - 2.04"

⬡ HEXAGONAL BARS
6 mm - 45 mm
0.23" - 1.77"

⊠ SQUARE BARS
6 mm - 37 mm
0.23" - 1.45"

↔ BAR LENGTH

1200 mm - 3200 mm / 47.24" - 125.98"
1200 mm - 4100 mm / 47.24" - 161.41"
1200 mm - 6100 mm / 47.24" - 240.15"

⌚ MAX FEED SPEED
30 m/min - 98.42'/min

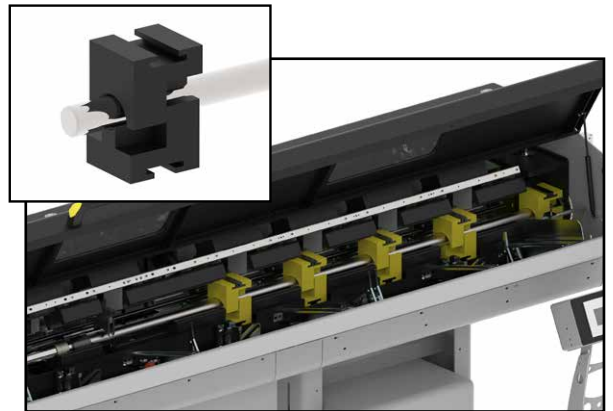
↔ MAX REMNANT LENGTH
300 mm - 11.81"

⚙️ AIR PRESSURE REQUIRED
6.5-7.5 bar



SELF ADJUSTING GUIDE CHANNEL

Thanks to the Top Automazioni Patent, FUSION features a self-adjusting guide channel (mm per mm) managed by the PLC. The guide channel is entirely made in vulcanized rubber (Vulkollan). The bars are dipped in an oil bath while processing.



EXTRA STEADY BLOCK

On demand it's possible to apply to the FUSION an external steady block system, suitable for the small diameter bars. The steady block, in fact, will self-activate for any diameter below 20mm (0.78").



REMNANT EXTRACTION

FUSION offers two different remnant managements:

- 1) Rear extraction performed by means of a self centering extractor
- 2) Front ejection



REPOSITIONING SYSTEM

FUSION doesn't require the spindle liner, but it's anyway equipped with a rail system that enables axial 600 mm (23.62") or radial 600 mm (23.62") displacement (alternative option), helping the lathe servicing.



AUTOMATIC MANAGEMENT

The FUSION bar feeder is completely managed by a touch screen PLC interacting with a Brushless motor and a digital pneumatic valves system which controls speed, thrust and all the automations. From the PLC the operator can shift from one diameter to another one IN 60 SECONDS, simply entering the intended diameter on the keyboard.



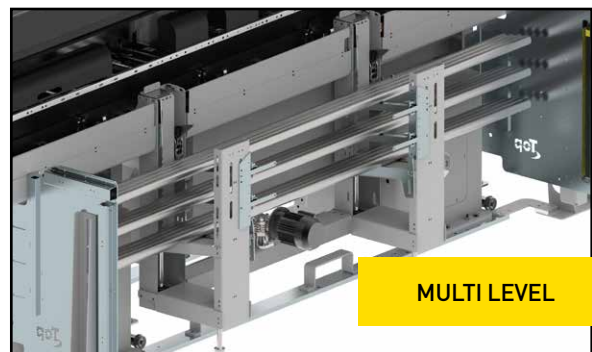
BAR STORAGE

The FUSION can be equipped with 4 different loading storages:

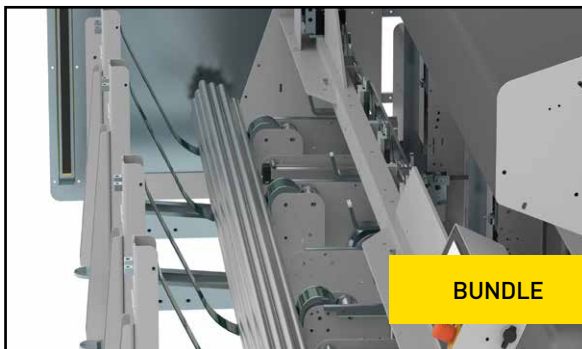
- 1) **SINGLE LEVEL** magazine, featuring a single storage with 235 mm (9.25") carrying capacity
- 2) **MULTI LEVEL** magazine, featuring 3 different levels, each with 300 mm (11.81") carrying capacity
- 3) **FORK LIFTER** magazine, featuring a 700 mm (27.55") double fork loader.
- 4) **BUNDLE**, which supports up to 2 ton (4.409 lbs) of weight



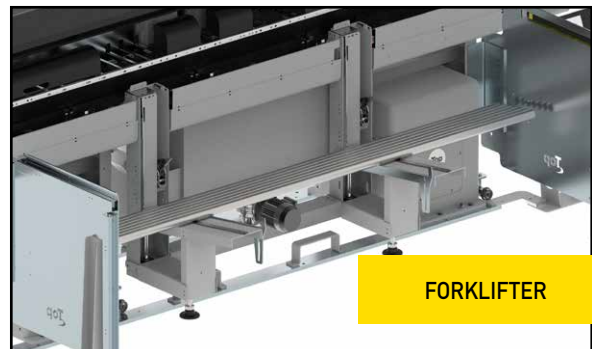
SINGLE LEVEL



MULTI LEVEL



BUNDLE



FORKLIFTER

Return Speed

SUITABLE FOR FIXED AND SLIDING HEADS CNC LATHES

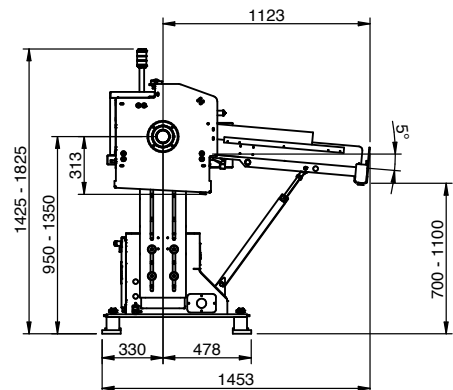
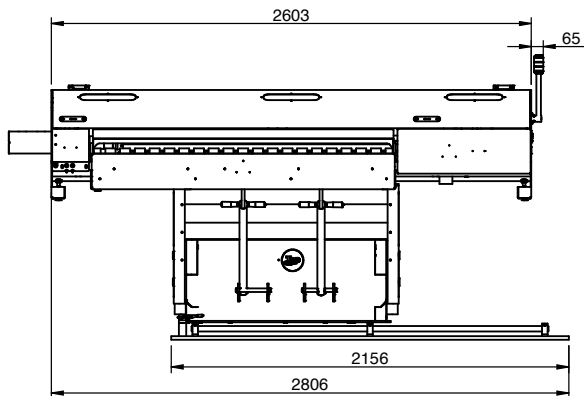
MACHINED PART HANDLING VIA HMI PANEL

AVAILABLE FOR UNLOADING OF WORKED PART WITH LENGTH FROM 200 mm (7.87") TO 1500 mm (59.05") AND DIAMETERS BETWEEN 20 mm (0.78") AND 8 mm (0.31")

(DEPENDING ON COUNTER SPINDLE LINE LENGTH)



BAR FEEDER LAYOUT





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RETURN SPEED

TECHNICAL DATA



MACHINED PART LENGTH

150 mm - 1500 mm / 5.90" - 59.05"



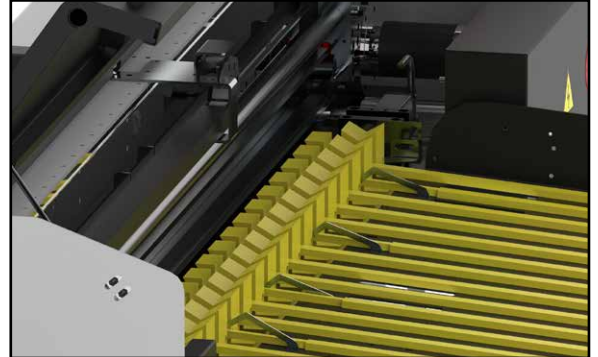
MAX FEED SPEED
30 m/min - 98.42'/min



AIR PRESSURE REQUIRED
8 bar

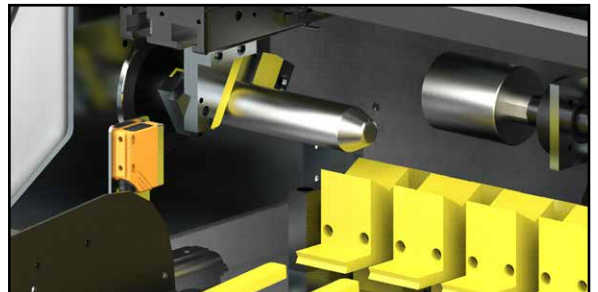
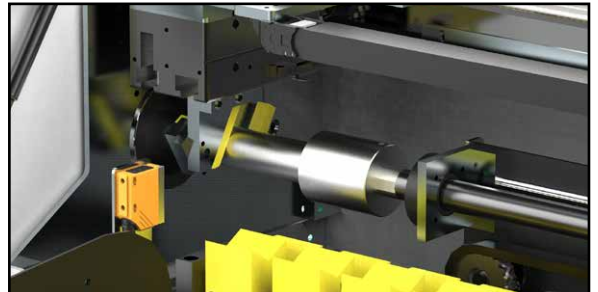
SELF ADJUSTING GUIDE CHANNEL

Return Speed is equipped with a polyzene channel ("v" section) that automatically adjusts within 10 seconds to the diameter set by plc.



PIECE MANAGEMENT

Return Speed unloads pieces from 150 mm (5.90") to 1500 mm (59.05") in length and from $\varnothing 8$ to $\varnothing 80$ mm ($\varnothing 0.31$ " to $\varnothing 3.14$ "") in diameter. The unloading cycle lasts 23 seconds and it is performed by an elastic collet (or by a magnet on request). All the unloading procedure is carried on by pneumatic chucks covered in plastic material to protect the piece.



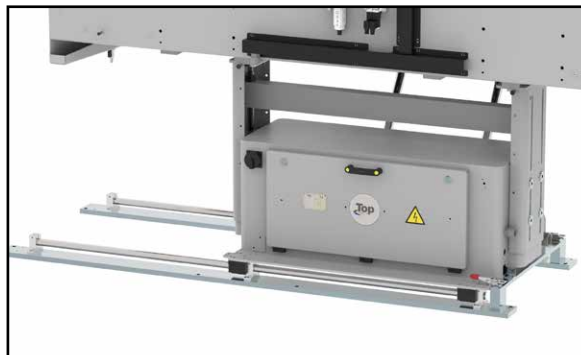
PIECE UNLOADING

The RETURN SPEED unloads the piece by means of a pneumatic chuck covered in plastic material: the chuck locks the piece and positions it on the polyzene channel at the unloading position, then the channel rotates and makes it slide on the storage. This system, patented by Top Automazioni, allows the piece to be unloaded in several, positions increasing the unloading capacity of the machine.



REPOSITIONING SYSTEM

In order to ease the liners insertion, the RETURN SPEED is equipped with a rail system that enables at 800 mm (31.49") radial or axial displacement (alternative option), helping also the lathe servicing. The bar feeder fastening, on its rails, is provided by fast block hooks.



AUTOMATIC MANAGEMENT

The RETURN SPEED unloader is controlled by a PLC touchscreen that interacts with a brushless motor and solenoid valves to regulate forward speed, thrust force and all automated features.



BAR STORAGE

Return Speed is equipped with an angle-adjusting inclination storage between 0° and 25°. Return Speed has an unloading surface of 800x1500 mm (31.49"x59.05") covered by polyzene strips, that protect the piece during unloading. Return Speed can also feature a multiple rows unloading (from 1 to 5 rows, depending on the length of the unloaded piece).





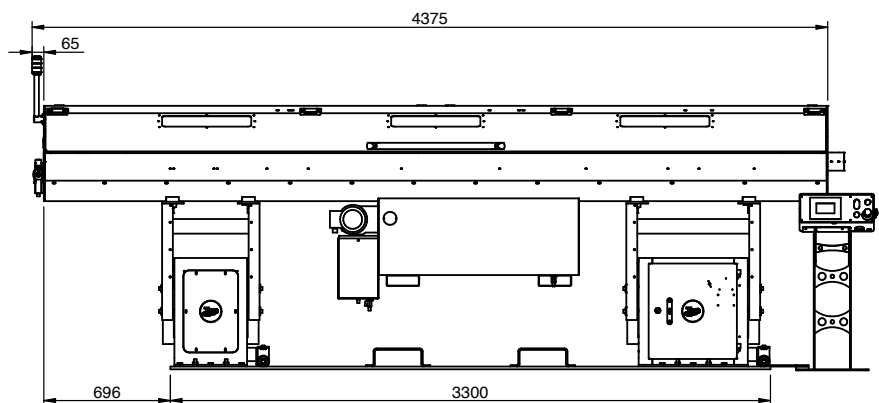
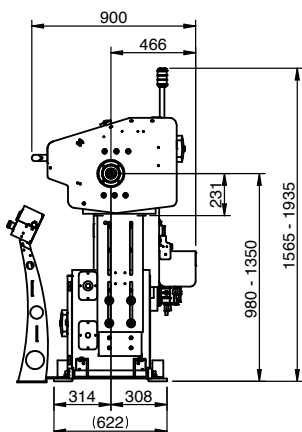
**SUITABLE FOR FIXED-HEAD CNC LATHES
WITH SPINDLE CAPACITY
FROM 8 mm (0.31") TO 52 mm (2.04")**

**QUICK INTERCHANGEABLE
GUIDE CHANNEL**

**AVAILABLE IN 3200 mm (10.5')
AND 4100 mm (13')
LENGTH CAPACITIES**



BAR FEEDER LAYOUT





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BETA

TECHNICAL DATA

∅ ROUND BARS
8 mm - 52 mm
0.31" - 2.04"

⬡ HEXAGONAL BARS
8 mm - 45 mm
0.31" - 1.77"

⊠ SQUARE BARS
8 mm - 37 mm
0.31" - 1.45"

↔ BAR LENGTH

1200 mm - 3200 mm / 47.24" - 125.98"
1200 mm - 4100 mm / 47.24" - 161.41"

⌚ MAX FEED SPEED
30 m/min - 98.42'/min

⌚ MAX REMNANT LENGTH
↔ 300 mm / 11.81"

⌚ AIR PRESSURE REQUIRED
6.5-7.5 bar

GUIDE CHANNEL

BETA features a round section guide channel, manually interchangeable; entirely made of plastic material, Vulkollan type, the guide channel is extremely resistant and suitable for high speed bar processing.



FRONT STEADY BLOCK

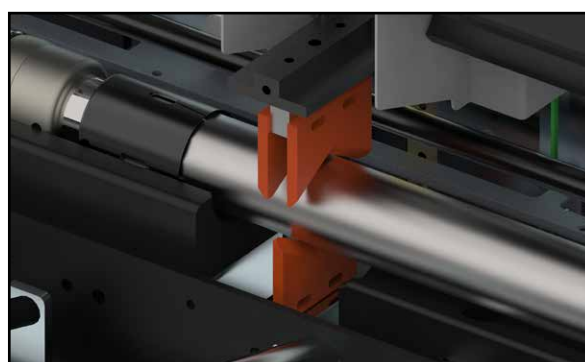
BETA features a special steady block, in the front part of the bar feeder, interchangeable every 5 mm (0.19"), in order to reach the highest performances in the bar rotation.



REMNANT EXTRACTION

BETA offers two different remnant managements:

- 1) Rear extraction performed by means of a self centering extractor
- 2) Front ejection



REPOSITIONING SYSTEM

BETA doesn't require the spindle liner, but it can be equipped with a rail system that enables axial 600 mm (23.62") or radial 600 mm (23.62") displacement (alternative option), helping the lathe servicing.



AUTOMATIC MANAGEMENT

The BETA bar feeder is completely managed by a PLC interacting with a brushless motor and a digital pneumatic valves system which controls speed, thrust and all the automations.



BAR STORAGE

BETA can be equipped with one single level magazine, featuring a single storage with 235 mm (9.25") carrying capacity.





**SUITABLE FOR FIXED-HEAD CNC LATHES
WITH SPINDLE CAPACITY
FROM 8 mm (0.31") TO 100 mm (3.93")**

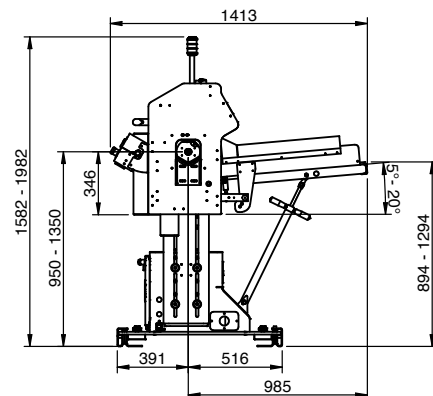
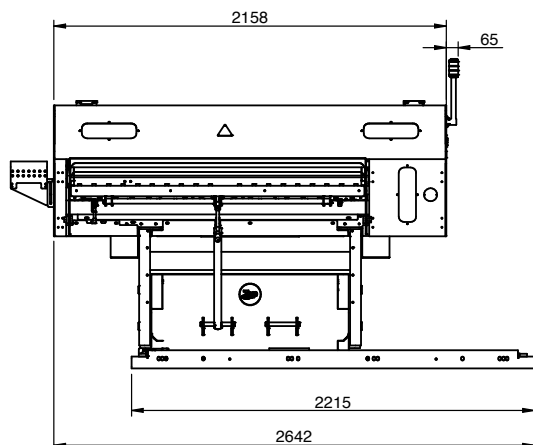
**BAR STOCK HANDLING
VIA HMI PANEL**

ATTENTION:

The maximum workable length of the bar is equal to the lathe spindle length



BAR FEEDER LAYOUT





← Scan the QR CODE to watch the video



TECHNICAL DATA

∅ ROUND BARS
8 mm - 100 mm
0.31" - 3.93"

⬡ HEXAGONAL BARS
8 mm - 87 mm
0.31" - 3.42"

⊠ SQUARE BARS
8 mm - 71 mm
0.31" - 2.79"

↔ BAR LENGTH

200 mm - 1600 mm / 7.87" - 62.99"

⌚ MAX FEED SPEED
80 m/min - 262.46'/min

⌚ MAX REMNANT LENGTH
↔ not available

⚙️ AIR PRESSURE REQUIRED
not available



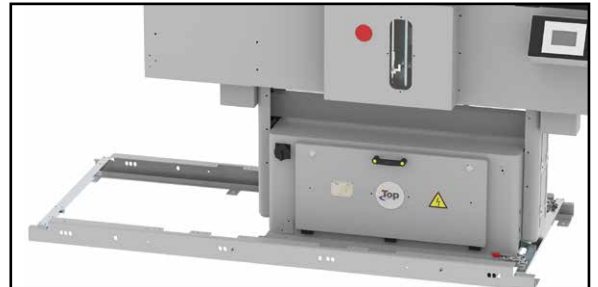
SELF ADJUSTING GUIDE CHANNEL

The bar feeder channel is mobile, allowing to process bar diameters ranging from 8 mm (0.31") up to 100 mm (3.93"); the system is managed by the PLC. The channel is entirely made in special plastic material, in order to grant a smooth and silent bar scrolling.



REPOSITIONING SYSTEM

In order to ease the spindle liners insertion, the bar feeder is equipped with a rail system that enables at 800 mm (31.49") radial or axial displacement (alternative option), helping also the lathe servicing. The bar feeder fastening, on its rails, is provided by fast block hooks.



MAGIC BUSHING SYSTEM

The MAGIC BUSHING SYSTEM (sold apart) increase the lathe spindle length of 500mm (19.68"), allowing to process in complete safety, bars that normally would protrude from the back of the spindle.



SPINDLE LINERS

To achieve the full capability of the MAGIC bar feeder, the internal diameter of the spindle liners should not be larger than 5mm (0.19") more than the bar to process. The spindle liner can be fixed by means of a flange, bolted to the rear side of the lathe.



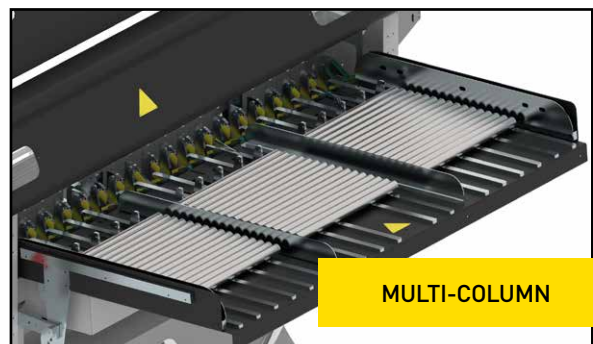
AUTOMATIC MANAGEMENT

The MAGIC bar feeder is completely managed by the PLC interacting with a Brushless motor and a pneumatic valves system which controls speed, thrust and all the automations. From the PLC the operator can shift from one diameter to another one in 60 seconds, simply entering the intended diameter on the keyboard.



BAR STORAGE

On demand, MAGIC can offer a multiple adjustable bar storage where the bars are stored side by side depending on the length worked, up to a maximum of 3 rows. This system, patented by Top Automazioni, makes the most of the bar storage capacity (for the reuse of remnants as well) and leads to a longer working cycle, avoiding the need to recharge frequently.





HOW TO FIND US ►
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