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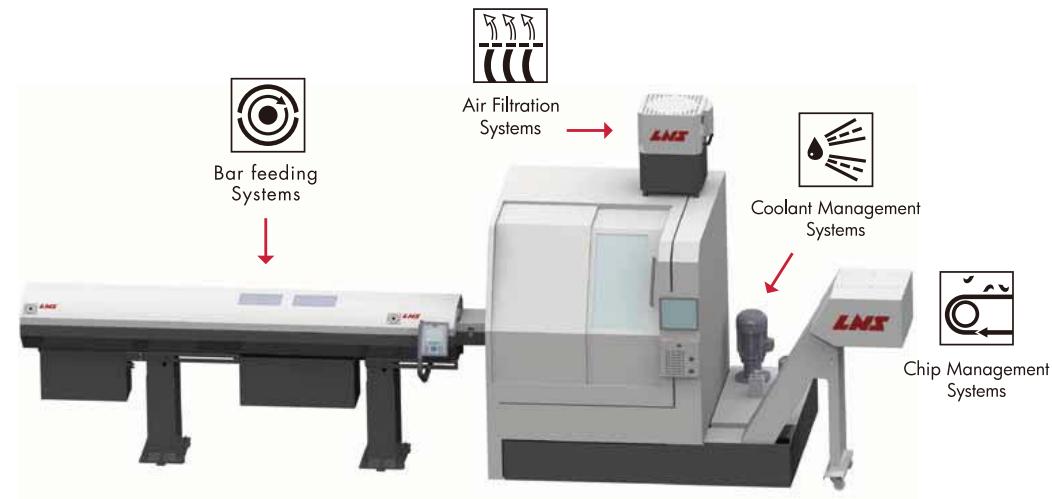


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# LNS ASIA PRODUCT RANGE



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Diameter range 棒材直徑範圍

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油膜式長棒材自動送料機

GT 112

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XT320 S2

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GT326

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SN542 S2

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**Automatic Mechanical Bar Feeders - Long Barstock**

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**Automatic Hydraulic Bar Feeders - Long Barstock**

油膜式長棒材自動送料機

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**Automatic Bar Feeders - Short Barstock**

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**PEDEK Diameter range 棒材直徑範圍**

Type	Hydraulic				Mechanical			Short		
model	GT 112	XT320 S2	GT 326	SN542 S2	KE408	KE710	KT	SMN20	SL65 S	DH65 S2 DH65L S2
Meter	2.0/2.5	2.5/3.2	2.5/3.2	2.5/3.2	1.5/2.0	1.5/2.0	2.5/3.0	1.1	1.2/1.5	1.2/1.5
ømm	3.2	3.7/4.0	3.7/4.0	3.7/4.4	2.5/3.0	2.5/3.0	3.7/4.0			
0.7/0.8	(0.7)				0.8					
1	◎				◎	1				
2	◎				◎	◎	2			
3	◎	3	3		◎	◎	◎			
4	◎	◎	◎		4	◎	◎	4		
5	◎	◎	◎	5	◎	◎	◎	5	5	5
6	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
7	◎	◎	◎	◎	7	◎	◎	◎	◎	◎
8	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
10	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
12	12	◎	◎	◎	◎	◎	◎	◎	◎	◎
16		◎	◎	◎	◎	◎	◎	◎	◎	◎
20		20	◎	◎	20	20	20	20	20	20
26			26	◎						
28				◎						
32				◎						
35				◎						
38				◎						
42				◎						
45					45					
51									◎	◎
65								65	65	65

**LNS Diameter range 棒材直徑範圍**

Type	Hydraulic			Short
model	LNS XH212	LNS XH326	LNS XH552	LNS SL80 S
Meter	3.2/3.7/4.0	3.2/3.7/4.0	3.2/3.7/4.0	1.6
ømm				
2	2			
3	◎	3		
4	◎	◎		
5	◎	◎	5	
6	◎	◎	◎	6
7	◎	◎	◎	◎
8	◎	◎	◎	◎
10	◎	◎	◎	◎
12	12	◎	◎	◎
16		◎	◎	◎
20		◎	◎	◎
26		26	◎	◎
28			◎	◎
32			◎	◎
35			◎	◎
38			◎	◎
42			◎	◎
45			◎	◎
51			◎	◎
52			52	◎
65				◎
80				80





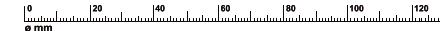
### Automatic hydraulic bar feeders - long barstock 油膜式長棒材自動送料機

GT 112

XT320 S2

GT326

SN542 S2



### Automatic Hydraulic Bar Feeders - Long Barstock



## GT 112

- Screw loading system with replaceable special pitches are cater for particular applications.
- Dual size channel combined two dimensions in one, giving good flexibility in production.
- Easy change pusher.
- Adjustment free clamping vice.
- Sectional guiding cover control. (PATENT)
- Mechanical synchronization system.
- Movable rear stand enables to move for maintenance.(Option)
- 螺桿式下料系統，可替換螺桿螺距規格，滿足特殊加工應用需求。
- 雙尺寸之單一料管，增加產品的應用彈性。
- 快拆式壓棒更換。
- 免調整式夾料裝置。
- 分段式控制料蓋。(專利)
- 機械式同步系統。
- 移動式後腳座便於維護工作。(選配)



Model 機型	2.0M	2.5M	3.2M
Bar Diameter 棒材直徑	(Ø0.7) Ø1 ~ Ø12 mm (Ø0.7mm, may vary depending on application 視應用條件不同，此規格可能有所變更)		
Max Bar Length 最長棒材長度	2060 mm	2560 mm	3260 mm
Bar Loader Capacity 棒材容量	20 pcs / 14 pcs		
Overall Length 機械長度	2828 mm	3383 mm	4083 mm
Width of Machine 機械寬度	432mm		
Spindle Height 主軸高度	875 ~ 1275 mm		
Weight 機器重量	300 kg	355 kg	370 kg
Power Supply 電源供應	220V 3p (Adjustable upon power supply from lathe 可依車床供電調整)		
Air Supply 氣壓供應	5 ~ 7 kg/cm <sup>2</sup>		
Options 選配	Telescopic tube 伸縮套管 Synchronization device 同步裝置		

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## XT320 S2

- A space saving compact model.
- Rubber guiding channel reduces noise to a minimum.
- Capable of feeding profiled bar stocks.
- Easy to operate. High performance.
- Hydraulic type ensures silent turning.
- The bar feeder employs a PLC controller, featuring parameter settings, stable motion control and convenient trouble shooting.
- Remote controller gives maximum operation convenience.
- I/O interfacing with any NC type or CNC lathe.
- Bar pushing force are adjusted automatically.
- Self-detection of abnormal motion.
- 機身瘦小，節省安裝空間。
- 耐磨消音膠管。
- 異形材送料功能。
- 操作容易、作業能力強。
- 油膜式，無噪音。
- 料機使用PLC，有多項參數設定功能，穩定性佳，維修容易。
- 移動式控制盒操作簡易。
- 簡易的I/O介面，可與任何的NC, CNC車床連線。
- 送料推力可藉由PLC進行調整。
- 具動作異常檢知機能。



Model 機型	2.5M	3.2M	3.7M	4.0M
Bar Diameter 棒材直徑	Ø3mm ~ Ø20mm			
Max Bar Length 最長棒材長度	2600 mm	3200 mm	3750 mm	4100 mm
Bar Loader Capacity 棒材容量	Ø5mm x 52 pcs			
Overall Length 機械長度	3355 mm	3950 mm	4505 mm	4855 mm
Width of Machine 機械寬度	720mm			
Spindle Height 主軸高度	900 ~ 1200 mm			
Weight 機器重量	378 kgs	393 kgs	435 kgs	440 kgs
Power Supply 電源供應	220V 3p (Adjustable upon power supply from lathe 可依車床供電調整)			
Air Supply 氣壓供應	5 ~ 7 kg/cm <sup>2</sup>			
Options 選配	Telescopic tube 伸縮套管 Synchronization device 同步裝置			

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### Automatic Hydraulic Bar Feeders - Long Barstock



## GT 326

- Unique appearance with multi-bending exterior cover.
- PU guiding elements minimize vibration noise and are easily replaced.
- Powerful clamping capacity for bar insertion and extraction.
- Loading mechanism changeover simplicity.
- Reliable front stabilizer with V-shaped bushings. Easy manual adjustment for different bar diameters. (PATENT)
- PLC controlled operation. Parameter setting ensure optimal function for every application. Alarm messages allow convenient trouble shooting
- Hand hold remote control combined with HMI provides maximum operation convenience (Option)
- 多邊折彎外蓋展現獨特外觀構造。
- PU耐磨送料膠管有效降低震動噪音，並且更換簡易。
- 高強度夾料機構，插拔料動作順暢。
- 換料調整快速。
- 可靠的V型夾塊前端防震裝置，針對不同直徑棒材，手動調整簡易快速。(專利)
- PLC控制運轉，多項參數設定滿足各式應用，異常顯示，方便故障排除。
- 手持式控制器結合了人機介面，提供最便利的操作。(選配)



Model 機型	2.5M	3.2M	3.7M	4.0M
Bar Diameter 棒材直徑	Ø3mm ~ Ø26mm			
Max Bar Length 最長棒材長度	2640 mm	3230 mm	3790 mm	4230 mm
Bar Loader Capacity 棒材容量	Ø3 x 90 pcs			
Overall Length 機械長度	3365 mm	3955 mm	4515 mm	4955 mm
Width of Machine 機械寬度	513 mm			
Spindle Height 主軸高度	800 ~ 1130 mm			
Weight 機器重量	352 kgs	370 kgs	386 kgs	401 kgs
Power Supply 電源供應	220V 3p (Adjustable upon power supply from lathe 可依車床供電調整)			
Air Supply 氣壓供應	5 ~ 7 kg/cm <sup>2</sup>			
Options 選配	Telescopic tube 伸縮套管 Synchronization device 同步裝置			

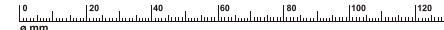
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**SN542 S2**

- Convenient parameters setting without need of any program modification.
- Length of waste material can be set as desired.
- Short length of waste stock for reducing material waste to the minimum.
- Retract stroke can be set up as desired.
- I/O interfacing with any type of CNC lathe.
- Self detection for abnormal motions and display on LCD.
- Remote controller provides convenient running test and adjustment.
- Self detection for too short and too long stock.
- Bar diameter change is conveniently and quickly accomplished.
- Bar magazine empty detection and warning.
- Compact model for great space saving.
- 設定參數極方便，無需更改任何程式。
  - 採用移動式控制器，試車削或調整極方便。
  - 殘料長度可簡易設定。
  - 料短，大幅降低材料浪費。
  - 可與任何型式CNC車床之I/O介面。
  - 具動作異常檢知機能，並顯示在LCD上。
  - 工具太短、太長檢測功能。
  - 無料檢知及警示。
  - 置料架材欠檢知及警示。
  - 縮短型結構，大幅節省空間。
  - 變更材料外徑調整簡易、快速。

**FEDEK**

## Bar Feeding Systems

**Automatic mechanical bar feeders - long barstock**  
機械式長棒材自動送料機**KE408****KE710****KT****KE408 / KE710**

- Screw type bar loader allows one bar loading per revolution.
- Small diameter tube. Tight bar guard.
- Double material clamps ensure accurate center of clamping.
- Heavy weight feed mechanism suits slender materials.
- High running speed up to 12000RPM.
- Simplified bar arrangement eliminates bar bending problem.
- 螺桿式下料每轉一圈一支下料。
- 小直徑料管，小間隙料蓋。
- 雙夾料設計，確保夾料中心精準。
- 重錘式送料機構，適合細棒材。
- 耐高轉速12000RPM。
- 排料機構簡化，材料無彎曲之慮。



Model 機型	KE408	KE710
Bar Diameter 棒材直徑	Ø0.8 ~ Ø4 mm	Ø1 ~ Ø7 mm
Max Bar Length 最長棒材長度	1500 mm   2000 mm	2500 mm   3000 mm
Bar Loader Capacity 棒材容量	34pcs	22pcs
Width of Machine 機械寬度	480mm	
Spindle Height 主軸高度	680 ~ 1280 mm	
Weight 機器重量	156 ~ 210 kgs	
Power Supply 電源供應	220V 2p (Adjustable upon power supply from lathe 可依車床供電調整)	
Options 選配	3 sections channel cover 三段式料蓋	

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**KT Series**

- Double-layer magazine greatly increases bar loading capacity.
- Servo motor drive combined with balanced torque creates superior bar feeding performance.
- Movable stands enable the bar feeder to be mounted fast and conveniently.(Optional)
- Air operated anti-vibration device is simply equipped and durable.(Optional)
- Rubber guiding channel minimizes the noise.(Optional)
- Synchronized device.(Optional)
- 雙層置料設計，大幅增加棒材容量。
- 採用伺服馬達驅動，配合平衡力矩，送料效果優異。
- 移動式腳座，機體固定快速、方便。(選購配備)
- 氣壓式防震裝置，結構簡化、安全耐用。(選購配備)
- 膠管有效減震，降低噪音。(選購配備)
- 同步裝置。(選購配備)



Model 機型	KT12	KT15	KT16	KT20
Bar Diameter 棒材直徑	Ø2~12mm	Ø3~15mm	Ø4~16mm	Ø5~20mm
Max Bar Length 最長棒材長度	2580 mm (2.5M) / 3080 mm (3.0 M)			
Bar Loader Capacity 棒材容量	Ø12mm x 34 pcs	Ø15mm x 28 pcs	Ø16mm x 26 pcs	Ø20mm x 20 pcs
Width of Machine 機械寬度	480mm			500mm
Spindle Height 主軸高度	738 ~ 1188 mm			900 ~ 1200 mm
Weight 機器重量	150 ~ 230 kgs			
Power Supply 電源供應	220V 2p (Adjustable upon power supply from lathe 可依車床供電調整)			
Air Supply 氣壓供應	5 ~ 7 kg/cm <sup>2</sup>			
Options 選配	Synchronization device 同步裝置			

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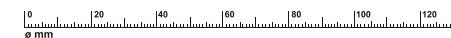
### Automatic bar feeders - short barstock

短棒材自動送料機

SMN20

SL65 S

DH65 S2



### Automatic Bar Feeders - Short Barstock



## SMN20

- Extremely short remnant produced due to transmission without a finger chuck.
- Suitable for high speed and high precision CNC lathes.
- Available feeding for recycling remnants.
- Fuzzy feeding prevent bars from hitting against the turret.
- Loading takes around 4 seconds in cycling time.
- Self-display functions on malfunction, workpieces remaining and alarm message.
- 不須任何料夾，棒材加工完成後，殘料極短。
- 適用於高轉速、極精密棒材加工的CNC車床送料。
- 適用於走心車床所產生的殘料再次應用。
- 多功能送料，防止棒材撞擊車床刀塔。
- 換料循環時間極短，最快4秒。
- 異常偵測功能、尚可加工數量、異常訊息顯示。



Model 機型	SMN20
Bar Diameter 棒材直徑	Ø4 ~ Ø20 mm
Max Bar Length 最長棒材長度	1100 mm
Bar Loader Capacity 棒材容量	Ø4 x 125 pcs
Overall Length 機械長度	1500 mm
Width of Machine 機械寬度	577 mm
Spindle Height 主軸高度	962 ~ 1262 mm
Weight 機器重量	258 kgs
Power Supply 電源供應	220V 2p (Adjustable upon power supply from lathe 可依車床供電調整)
Air Supply 氣壓供應	5 ~ 7 kg/cm <sup>2</sup>
Options 選配	Retraction system 移動式腳座

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## SL65 S

- Include three pushers to cover entire range of the barfeed (6 mm, 12 mm, 20 mm).
- Accommodate most material types and shapes such as round, square, hexagon bar stocks.
- Self detection for any abnormal motions and displays on LCD of remote control.
- Short remnant for reducing material waste to minimum.
- Convenient parameter setting without any program modifications.
- Extremely short bar change cycle time.
- 搭配三種不同尺寸(6mm、12mm、20mm)的壓棒以涵蓋所有送料的棒材直徑範圍。
- 適用於各種樣式的材料，例如圓形、方形以及六角型的棒材。
- 自動檢知任何異常動作並顯示在手控盒上的人機介面。
- 殘料短，大幅降低材料浪費。
- 參數設定方便無需修改任何程式。
- 換料循環時間極短。



Model 機型	1.2M	1.5M
Bar Diameter 棒材直徑	Ø5 mm ~ Ø65 mm	
Max Bar Length 最長棒材長度	1210 mm	1510 mm
Magazine Capacity 棒材容量	Ø5 x 114 pcs	
Overall Length 機械長度	1660mm	1960mm
Width of Machine 機械寬度	1127mm	
Spindle Height 主軸高度	853 mm ~ 1243 mm	
Weight 機器重量	348 kg	386 kg
Motor 馬達	Servo 伺服	
Power Supply 電源供應	220V 2p (Adjustable upon power supply from lathe 可依車床供電調整)	
Air Supply 氣壓供應	5 ~ 7 kg/cm <sup>2</sup>	
Options 選配	X-axis retraction system(stroke 300mm) Z-axis retraction system(stroke 600mm) X軸移動式腳座(行程300mm) Z軸移動式腳座(行程600mm)	

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## Automatic Bar Feeders - Short Barstock



## DH65 S2 / DH65L S2

- No restriction to lathe running speed.
- Suitable for feeding raw material without surfacial process.
- No special requirement for bar straightness accuracy.
- Smart human/machine interface provides convenient parameter settings.
- Alarm display for convenient maintenance.
- Convenient parameter setting for easy change of production.
- Electrical control system meets CE standards.
- Fits any CNC lathe.
- Movable control box for convenient operation.
- 車床轉速無限制。
- 適合“黑皮”棒材之送料。
- 棒材直度無需嚴格要求。
- 智慧型人機介面控制，參數設定簡易。
- 換料循環時間極短，最快4秒。
- 具異常顯示功能，維修方便。
- 更換棒材尺寸，參數設定簡易。
- 電控系統符合歐洲CE標準。
- 適用於任何CNC車床。
- 棒材送出定位檢知及警示。
- 移動式操作箱，操作方便。



Model 機型	1.2M	1.5M
Bar Diameter 棒材直徑	Ø5 ~ Ø65 mm	
Max Bar Length 最長棒材長度	1210mm	1510mm
Bar Loader Capacity 棒材容量	Ø5 x 114 pcs	
Overall Length 機械長度	1660mm	1960mm
Width of Machine 機械寬度	1126 mm	
Spindle Height 主軸高度	850 ~ 1250 mm	
Weight 機器重量	298 kgs	328 kgs
Power Supply 電源供應	220V 2p (Adjustable upon power supply from lathe 可依車床供電調整)	
Air Supply 氣壓供應	5 ~ 7 kg/cm <sup>2</sup>	
Options 選配	X-axis retraction system(stroke 300mm) Z-axis retraction system(stroke 600mm) X軸移動式腳座(行程300mm) Z軸移動式腳座(行程600mm)	

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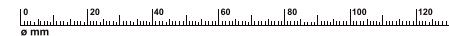


### Automatic hydraulic bar feeders - long barstock 油膜式長棒材自動送料機

LNS XH212

LNS XH326

LNS XH552



### LNS XH326

- This sophisticated device is especially suitable for loading smaller bar diameter.
- Optimal performance in high speed turning thanks to its highly rigid design.
- Robust and reliable anti-vibration device with V-shaped elements, easy and quick adjustment without tooling, open and closed positions can be set separately for pusher guiding.
- User-friendly remote control with integrated display, graphical human-machine interface and function keys.
- 精緻的下料裝置特別適合細小棒材。
- 堅固的設計使高速運轉更具效能。
- 易於調整且堅實可靠的V型防震裝置，其開閉可分別針對壓棒校調。
- 整合顯示、圖解的人機介面且易於操作的遙控裝置。



Model 機型	3.2M	3.7M	4.0M
Bar Diameter 棒材直徑	Ø3~Ø26 mm		
Max Bar Length 最長棒材長度	3250 mm	3810 mm	4250 mm
Magazine Capacity 棒材容量	Ø3 × 90 pcs		
Overall Length 機械長度	4056 mm	4616 mm	5056 mm
Width of Machine 機械寬度	626mm		
Spindle Height 主軸高度	800 ~ 1130 mm		
Weight 機器重量	406kgs	420kgs	470 kgs
Power Supply 電源供應	220V 3p (Adjustable upon power supply from lathe 可依車床供電調整)		
Air Supply 氣壓供應	5 ~ 7 kg/cm <sup>2</sup>		
Options 選配	Telescopic tube 伸縮套管 Synchronization device 同步裝置		

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### LNS XH212

- Highly rigid base for optimal performance in high speed turning.
- Servo motor drive combined with balanced torque creates superior bar feeding performance.
- Robust anti-vibration with V-shaped elements and quick adjusting, no tools necessary.
- Screw loading system allows guaranteed bar separation and reliable loading the guiding channels.
- User-friendly remote control with integrated display, graphical human-machine interface and function keys.
- Rubber guiding channel reduces machine vibration and noise to a minimum.(Optional)
- Synchronization device.(Optional)
- 堅固基底使高速運轉更具效能。
- 採用伺服馬達驅動，配合平衡力矩，送料效果優異。
- 易於調整且堅固耐用的V型防震裝置。
- 螺桿式下料系統使棒材分隔下料並確保其進到料管。
- 整合顯示、圖解的人機介面且易於操作的遙控裝置。
- 膠管有效減震，降低噪音。(選購配備)
- 同步裝置。(選購配備)

### Automatic Hydraulic Bar Feeders - Long Barstock



Model 機型	3.2 M	3.7M	4.0 M
Bar Diameter 棒材直徑	Ø2~Ø12 mm		
Max Bar Length 最長棒材長度	3250 mm	3810 mm	4250 mm
Bar Loader Capacity 棒材容量	15 pcs		
Overall Length 機械長度	4056 mm	4616 mm	5056 mm
Width of Machine 機械寬度	626 mm		
Spindle Height 主軸高度	800 ~ 1130 mm		
Weight 機器重量	406 kgs	420 kgs	470 kgs
Power Supply 電源供應	220V 3p (Adjustable upon power supply from lathe 可依車床供電調整)		
Air Supply 氣壓供應	5 ~ 7 kg/cm <sup>2</sup>		
Options 選配	Telescopic tube 伸縮套管 Synchronization device 同步裝置		

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### LNS XH552

- Locking points along the guiding channels stabilize the machining, increasing productivity.
- Power booster overcomes tight pusher collets or out-of-tolerance bar stocks to assist insertion or extraction.
- Fast adjustment of bar diameter changeover.
- Perfectly fitted design of loading fingers help smoothly bar loading.
- Remote control equipped with user-friendly HMI ensures operator easily manages functions for well interaction.
- 料管上蓋卡榫之設計，能提高加工的穩定性，並提升生產效率。
- 氣動式助推器輔助伺服馬達增強插拔料所需之力矩。
- 換料調整快速。
- 勾料機構之設計，使下料更精準且有效降低棒材對料管之撞擊聲量。
- 人機介面操控盒，操作便利，功能設定簡易，確保料機與車床互動順暢。



Model 機型	3.0M	3.7M	4.0M
Bar Diameter 棒材直徑	Ø5~Ø52 mm		
Max Bar Length 最長棒材長度	3200 mm	3800 mm	4200 mm
Magazine Capacity 棒材容量	Ø5 × 60 pcs		
Overall Length 機械長度	4130 mm	4730 mm	5130 mm
Width of Machine 機械寬度	893mm		
Spindle Height 主軸高度	920 ~ 1230 mm		
Weight 機器重量	900 kgs	950 kgs	1000 kgs
Power Supply 電源供應	220V 3p (Adjustable upon power supply from lathe 可依車床供電調整)		
Air Supply 氣壓供應	5 ~ 7 kg/cm <sup>2</sup>		
Options 選配	Synchronization device 同步裝置		

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### Automatic bar feeders - short barstock 短棒材自動送料機

#### LNS SL80 S



### Automatic Bar Feeders - Short Barstock



#### LNS SL80 S

- User-friendly remote control.
- Linear guiding for highly accurate positioning.
- Servo drive.
- "Easy click" pushing system for smooth bar stock control.
- Retraction system (Optional).
- Fast changeovers.
- 人性化的手持式控制器。
- 線性致動器提高定位精確度。
- 伺服驅動。
- 快拆式壓棒使棒材控制更平順。
- 移動式腳座。(選購配備)
- 快速換料。



Model 機型	LNS SL80 S
Bar Diameter 棒材直徑	Ø6~Ø80 mm
Max Bar Length 最長棒材長度	1600mm
Magazine Capacity 棒材容量	Ø5 x 130 pcs
Overall Length 機械長度	2010 mm
Width of Machine 機械寬度	940 mm
Spindle Height 主軸高度	930 ~ 1280 mm
Weight 機器重量	360 kgs
Motor 馬達	Servo 伺服
Power Supply 電源供應	220V 3p (Adjustable upon power supply from lathe 可依車床供電調整)
Options 選配	X/Z-axis retraction system(stroke 600mm) X/Z軸移動式腳座(行程600mm)

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### Chip Conveyor Systems 排屑系統

The machining of parts by milling, drilling or turning requires an effective and continuous evacuation of chips to prevent production slowdown or stops and therefore increase machine productivity.

LNS designs and produces conveyors and complete chip disposal systems for all machine types (milling, turning or machining centers) and for the most varied applications.

A complete range of conveyors covers all material types and chip shapes. In addition based on the filtration requirements, LNS chip conveyors can be equipped with up to 250µ filtration systems.

在工具機加工中，無論零件是銑削、鑽孔或車削加工，皆需將切屑持續有效地移出加工區域，以避免生產減速或停止，進而提高工具機的生產效率。

艾恩司所設計、生產的排屑機與完整的切屑處理系統可適用於各類型的工具機（銑削、車削或加工中心等），及各種不同的切屑處理應用。

完整的切屑處理系統，可以處理不同材料所產生的各種切屑。此外，根據過濾要求，艾恩司所生產的排屑機亦可裝配達到250 µ的過濾系統。

### Chip Management Systems



#### Belt Type 鏈帶種類



#### Specifications 規格

Material Type 材料種類	Chip Shape 切屑類型	Model 鏈帶種類	Coolant Filtration(µ) 冷卻液過濾(µ)
Mixed material (brass, steel, cast iron, aluminum, plastic) 各種材料(銅、鋼、鑄鐵、 鋁、塑料等)	Stringy coarse 螺旋狀	Standard duty 標準型 Heavy duty 重型 Super heavy duty 超重型	No filtration 無過濾系統
Mixed material (brass, steel, cast iron, aluminum, plastic) 各種材料(銅、鋼、鑄鐵、 鋁、塑料等)	Mixed shape 混合切屑	Hinge / Scraper belt combined 鏈帶和刮板 複合型	250µ-500µ  750µ

► Turbo HB

► Turbo MH Series

► Turbo HF



## Non Filtering Chip Conveyors 無過濾功能排屑機



**Turbo HB**  
Without filtration 無過濾功能

### Turbo HB

The Turbo HB is a standard conveyor used for chip removal where filtration is not necessary. The hinge belt can be used for all types of application and is the best choice for coarse and stringy chips.

艾恩司HB系列為適用於各類工具機中之無過濾系統的標準型鏈帶排屑機。其設計精巧，對於各種粗大或螺旋長狀切屑，有極佳的排屑效果。艾恩司HB系列排屑機經濟且實惠，是您在無需附帶過濾系統時的最佳選擇。



#### Your best choice for 您的最佳選擇

- Coarse and stringy chips  
適用於粗大和螺旋狀切屑
- Mixed material and plastic  
適用於各種金屬，塑膠材料
- No filtration  
無過濾功能
- Options 選購配備
  - Air header 空壓吹氣裝置
  - Small chips 小切屑
  - Anti-adherence device 防粘裝置
- Chip stripper bar 刮屑板
  - Stringy and bushy chips 螺旋狀，毛屑狀切屑
  - Variable speed control 變速控制器
  - Reduced coolant carried out 降低冷卻液帶出量
- Variety of belts 各式鏈帶種類

For most efficient chip removal and coolant drainage, a wide variety of belt designs are essential to maximize chip removal success: dimpled and perforated.

為使排屑效率最大化並確保冷卻液能順利流入水箱，針對帶窓板與穿孔鏈板，艾恩司提供了多樣的鏈帶設計種 供您選擇。



### Efficient Chip Removal

LNS uses specially-formed cleats to prevent curled chips from adhering to the belt, reducing wear and improving chip removal. Conveyor top cover height can be varied for special applications. Scraper cleats on the belts clean the entire surface of the bottom pan a minimum of two times per revolution

#### 高效排屑

艾恩司排屑機使用專門之彎折工藝所製造的夾板防止捲曲狀細屑黏在鏈帶上，進而減少鏈帶磨損，並提高排屑效率。排屑機上蓋的高度亦可依據各種特殊的應用場合做改變。而複合型鏈帶的刮板在每運轉一圈時，至少會進行兩次的刮屑動作，將框架底部的細屑排出。

### Wear-resistant Design

Special abrasion-resistant alloy material is used in high wear locations, such as upper and lower curves. Belt rollers and hinge pins are hardened for long life, even in the toughest applications.

#### 耐磨損設計

將特殊耐磨的合金材料應用於高磨損位置，例如上部和下部轉彎曲線。經過硬化處理的鏈帶滾輪和鉸鏈銷，即使在最惡劣的使用環境下亦可以長期使用。



## Filtering Chip Conveyors 過濾功能排屑機



### Turbo MH Series

Filtration to 250µ or 500µ  
250µ或500µ的過濾系統可供選擇



## Turbo MH Series

Thanks to this revolutionary concept from LNS: Filtration box is used in conjunction with a hinge / scraper belt conveyor. The type of conveyors are designed to remove all chips shapes made of different material incorporating self-cleaning filtration. The hinge belt removes the chips in the same way as a normal hinge belt conveyor but the use of filter box ensures that all chips greater than the filter box filtration level cannot pass into the coolant tank. The fine chips are continually carried out of the bottom of the conveyor by the scrapers mounted to the hinge belt. This revolutionary design ensures minimal floor space is utilized while still covering a wide range of applications and filtration needs.

創新的設計概念，以過濾盒、鏈板及刮板結合使用的複合過濾型排屑機，有效結合自清潔過濾系統，在鏈帶排出各類型切屑的同時，濾盒的應用能確保所有大於濾盒過濾範圍的切屑不會被沖入水箱裡，而崁在鏈板上的刮板亦不斷地將掉落在排屑機底部的微小切屑刮出。即使佔地空間不大，亦能發揮其最大效用，滿足各類應用得過濾需求。

**LNS**  
Turbo MH Series



### Your best choice for 您的最佳選擇

- Mixed shape chips 適用於各種類型切屑
- Mixed material 適用於各種材料
- Filtration to 250µ or 500µ 250 µ或500 µ濾盒可選

### Benefits of the Turbo MH Series

使用Turbo MH系列排屑機的益處

- Self cleaning filtration to 250 or 500 Micron  
250 µ 或 500 µ 自清潔濾盒
- Very small footprint (same as a standard conveyor)  
機身小，佔地空間不大（同標準鏈帶型排屑機）
- Flexible design for various flow rates  
根據工具機冷卻液流量進行靈活的設計
- Handles any chip shape (long and small)  
能處理各種切屑形式
- Attractive price  
有吸引力的價格
- Fits to most standard machine coolant tanks  
能應用於大多數工具機的冷卻液水箱
- Robust construction  
堅固耐用的結構



### Low maintenance

The filter boxes provide particle free coolant to 250µ, 500µ or 750µ (depending on the type). This filtration reduces the amount of coolant tank maintenance, extends the coolant and tooling life for cost saving operation. Each filter box is automatically cleaned whilst the conveyor is operating.

### 降低您的維護成本

根據所選濾盒的不同，對冷卻液可有250µ或500µ的過濾效果。過濾系統的使用，能降低您對工具機水箱的維護頻率，延長冷卻液和刀具的使用壽命。此外，排屑機在運行的同時，會自行清潔濾盒，亦幫助節省您的維護工作成本。

### Coolant flow and filtration

The filter box used meets the requirements of the machine tools maximum flow rate, assuring an optimal filtration. It is automatically cleaned during conveyor operation and designed to be retrofitted with a finer box easily.

### 冷卻液流量與過濾

過濾系統濾盒的設計在一般的設備運行下，可執行自動清潔，確保有最佳狀態的冷卻液流量與過濾效能，並且符合加工機床其最大的流量需求。其設計為可拆換的型式，更換簡易，方便使用者進行維護工作。



**Turbo HF**  
Filtration to 750µ  
750µ的過濾系統



**EXCLUSIVE FOR ASIA 亞洲應用獨家設計！**

**BEST PRICE  
最優價格！**

### Reliable operation

To ensure continuous operation, there are scraper cleats designed to clean chips washed into the conveyor frame. As smooth radius of the conveyor transitions, these scraper cleats can keep the frame free of chips so thus reduce the risk of a belt jam.

### 可靠性操作

Turbo HF排屑機適用於各種材料和形狀的切屑，如微粒、短屑、螺旋長屑等。其配備過濾系統，能有效將冷卻液中的切屑濾出，避免切屑污染機床水箱。其排屑系統設計，能應用於多種類型的加工設備，皆可發揮優良的排屑效果，有效提高生產效率。為確保設備的順暢運行，鏈板上設置有刮片，幫助清潔排屑機底部的切屑，使鏈板能順暢運行，保持排屑機持續運作。



Turbo HF

### Improve production efficiency

With more and more complex machining operations are carried out, the Turbo HF is designed to handle various chips from large to small and different materials applications like aluminum, brass and cast iron.

### 提高生產效率

隨著工具機的加工程序日趨複雜化，Turbo HF 的設計，能處理各式大小以及不同性質的材料應用如鋁、銅或鑄鐵等，皆可提供多種加工設良好的排屑處理效果。



## Low maintenance

The filter boxes provide particle free coolant to 750 $\mu$ . This filtration reduces the amount of coolant tank maintenance, extends the coolant and tooling life for cost saving operation. Each filter box is automatically cleaned whilst the conveyor is operating.

## 降低您的維護成本

過濾網孔徑為750  $\mu$  的濾盒使其對流經濾盒的冷卻液進行清潔過濾。過濾系統的使用，能降低您對工具機水箱的維護頻率，延長冷卻液和刀具的使用壽命。此外，排屑機在運行的同時，會自行清潔濾盒，亦幫助節省您的維護工作成本。

## Coolant flow and filtration

The filter box used meets the requirements of the machine tools maximum flow rate, assuring an optimal filtration. It is automatically cleaned during conveyor operation and designed to be retrofitted with a finer box easily.

## 冷卻液流量與過濾

過濾系統濾盒的設計在一般的設備運行下，可執行自動清潔，確保有最佳狀態的冷卻液流量與過濾效能，並且符合加工機床其最大的流量需求。其設計為可拆換的型式，更換簡易，方便使用者進行維護工作。

## Your best choice for 您的最佳選擇

- Mixed shape chips 適用於各種類型切屑
- Mixed material 適用於各種材料
- Filtration to 750 $\mu$  750 $\mu$  過濾等級

## Benefits of the Turbo HF

使用Turbo HF排屑機的益處

- Compact dimension 緊湊設計尺寸
- Discharge smaller footprint 合理的排屑口設計使佔地面積更小
- Few coolant carried out 有效降低冷卻液帶出量
- Self cleaning filtration 自清潔型過濾系統
- Fits to most standard machine coolant tanks 適配於多數工具機水箱
- Flexible design for various flow rates 可依冷卻液流量設計
- Handles any chip shape and any material 處理各式形狀、大小與材料的切屑
- Single drive for reduced energy consumption 單驅動器省電設計



## Oil mist collectors 油霧收集器

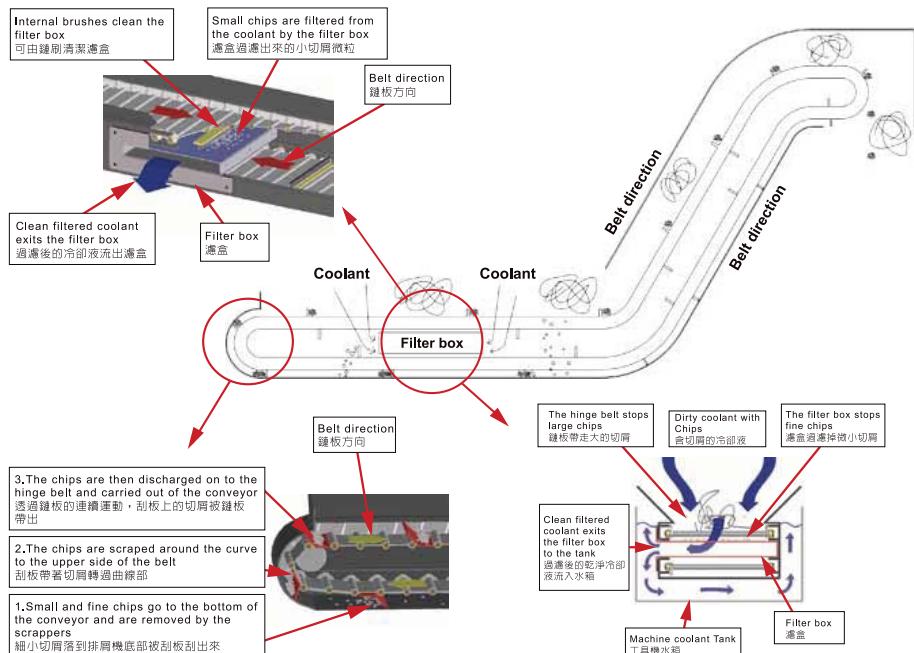
Fox WS Series : 250 • 500 • 1000 • 1500 • 2000

The Fox WS Series now available in Asia has been already successfully introduced in 2003 across Europe, USA and Japan, and gained an excellent reputation as quality solutions for the elimination of pollutions inside machine tool shops. An universal type of solution is designed to work in all kinds of applications with emulsion, oil, smoke and even in presence of dust and chips. Very compact dimensions for easy installation on the machine tool, it provides an excellent long term investment for the improvement of the working environment.

Fox WS 系列自2003年首度發布後，相繼在歐洲、美國、日本市場廣受好評，並被視為一能夠降低工具機內部汙染問題的理想解決方案。通用型的設計理念使該產品能適應於水溶性、油性、煙甚至於灰塵、碎屑混合複雜的煙霧環境。外型小而易於安裝在工具機設備上。因此，Fox WS的確是一項可以提高工作環境品質並且值得投資的產品。



## System schematic 系統圖解



## Fox WS Series: 250 • 500 • 1000 • 1500 • 2000

### Advantages

- Higher filtration efficiency - above 99 % \* 3 integrated filtration stages
- Lower electrical consumption - up to 50 % less than most competitors. IE2 efficiency motors
- Higher reliability - 24 months warranty
- Wider range - 4 models 250 to 1500 m<sup>3</sup>/h for all kinds of machine tools

### 優點

- 高效過濾，超過99%的過濾效率\*-集成式三級過濾
- 低電能消耗-馬達符合IE2標準，與其他產品相比可省多達50%電能
- 高品質、高可靠性-兩年保固
- 風量從每小時250立方米到1500立方米，四種機型可供選擇，適合各種工具機設備



\*According to AFNOR NFX 44-060

\*Depending on the application

\*根據AFNOR NFX 44-060標準

\*因產品應用不同可能有所差異

## Filtration efficiency / Air quality 過濾效率與空氣質量

The filtration efficiency of the Oil Mist collector determines how clean the air is inside the workshop and how healthy is the environment for the operators. LNS provides test reports to certify filtration level of the Fox WS line according to the AFNOR norm. In addition, trained LNS technicians can provide on-site measurement of air quality to measure with high accuracy how clean the air is. The analysis is conducted using a sophisticated dedicated instrument.

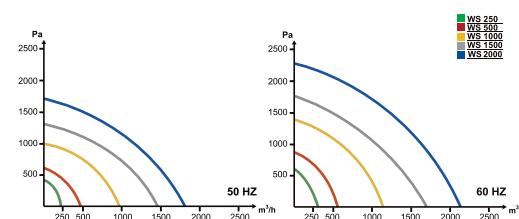
油霧收集器的過濾效率決定了工具機裡的空氣清潔程度和工作環境的健康指數。艾恩司基於AFNOR規範提供測試報告以證明WS系列油霧收集器產品的過濾等級。此外，經培訓認證的艾恩司技術人員使用專業的精密便攜檢測儀器可以提供現場空氣檢測服務。



## Oil Mist Collectors



### Air flow 空氣流量



## Technical specifications 技術規格

Model 型號	Fox WS 250	Fox WS 500	Fox WS 1000	Fox WS 1500	Fox WS 2000
Frequency 頻率	[Hz]	50 60	50 60	50 60	50 60
Nominal air flow rate 空氣流量(**)	[m³/h]	240 285	470 560	950 1130	1450 1720
Static pressure 靜壓	[Pa]	470 600	610 890	950 1420	1260 1800
Sound level 噪音等級	[dB(A)]	62 64	65 67	71 73	74 76
Motor 馬達	[kW]	0.24 0.3	0.37 0.4	0.75 0.9	1.5 1.8
Weight 重量	[kg]	28	35	55	75
					85

\* WS 500-1000: With hepa filter installed/ activated carbon=about -15%

加裝高效過濾器/活性碳過濾器附件後，空氣流量減少約15%

• Information is subject to change without notice.

本公司保留變更權利不另行通知。

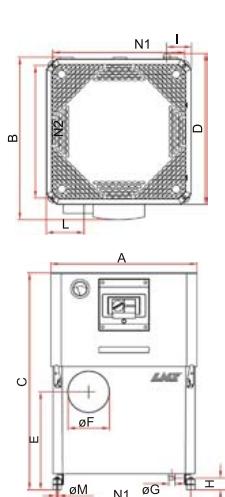
• All units painted in RAL 7035/7016 (special colors available upon request).

所有機型標準塗裝顏色為RAL 7035/7016 (可依據需求選配其他顏色)

• Electrical motor 馬達型號 (V/Hz): 230/50-400/50, 220/60

## Dimensions 尺寸(mm)

	A	B	C	D	E	ø F	ø G	H	I	L	N1 x N2 x ø M
Fox WS250	378	476	534	418	225	98	25	32	80	100	332 X 382 X 9
Fox WS500	408	505	630	450	265	123	25	42	85	119	363 X 395 X 9
Fox WS1000	525	592	781	533	353	148	25	42	90	136	478 X 478 X 9
Fox WS1500	600	667	892	607	387	198	25	42	95	168	552 X 552 X 9
Fox WS 2000	663	730	981	670	437	198	25	42	100	173	615 X 615 X 9



## LNS lexicon - Bar feeding systems

### LNS 辭典 – 棒材送料機系列

#### Device retraction

The device retraction system is intended to facilitate access to the lathe for changing the spindle liners or for carrying out maintenance or repairs. Depending on the model of bar loader, LNS offers three different systems: lengthways retraction, sideways retraction or a swing out system.

#### 移動式腳座

移動式腳座方便使用者更換車床主軸導套及機器維護修理之便利性。視機型不同，艾恩司提供三種移動式腳座：Z軸移動式腳座、X軸移動式腳座或轉向移動式腳座。

Z-axis retraction



X-axis retraction



Swing out system



#### Evacuation of remnants

LNS has two remnant evacuation systems :

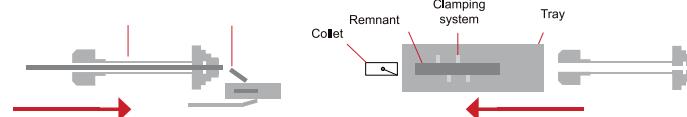
- The remnant is pushed forward by the next bar into the lathe's part collector.
- The remnant is pulled back across the spindle and deposited in a tray located behind the bar feeder.

#### 殘材處理

艾恩司提供兩種殘材處裡方式：

- 殘材由下一支新棒材推出至車床的工作收集箱。
- 殘材經過主軸拉回棒材送料機，然後落入殘材箱。

The new barstock pushes forward the remnant



#### Hydrobar®

Pressurized oil is introduced to the inside of the guiding tube, guiding channels or hydrostatic bearing elements. An oil film forms and separates the bar to be machined from the guide element. The more the rotation speed increases, the greater the hydrodynamic effect. LNS equips all its loaders with the Hydrobar® system.

液壓油導入套管、料管或流體靜力軸承元件，使得欲加工的棒材及料管之間油膜均勻分佈。當轉速愈快；流體效應愈大。



#### No rotation

If the spindle speed is zero, the hydrodynamic support is zero and the bar rests on the feed tube

#### 未旋轉

若主軸無轉速時，不會產生流體動力，棒材在料管中靜止不動。



#### Rotation starting

The revolving bar produces increased oil pressure and the bar is lifted from the bottom of feed tube.

#### 開始旋轉

棒材轉動時油壓升高，棒材就會從料管底部浮起。



#### Full speed rotation

With increasing speed, the hydrodynamic force increases and the bar revolves centrally, ensuring a smooth feed.

#### 全速旋轉

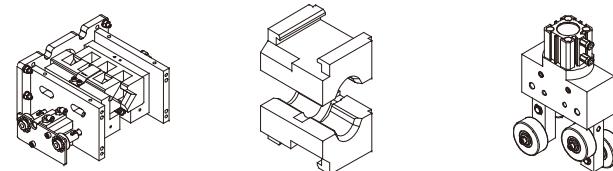
隨著速度增加，流體動力也增加，棒材就會在料管中心旋轉，確保送料順暢。

**LNS lexicon - Bar feeding systems****LNS 辭典 – 棒材送料機系列****Front rest**

To ensure optimum guidance closest to the entrance of the lathe spindle, LNS equips its bar loaders with a front rest. This system guarantees rotation speeds with no vibration along the entire length of the bar. The front rest is the last guide element in contact with the bar before the entrance of the lathe spindle.

**前端防震**

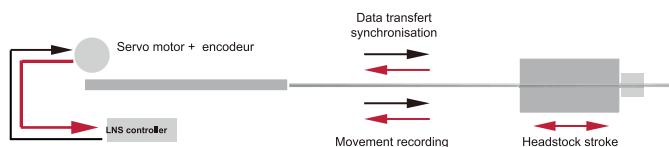
為了確保將棒材適當地送至最靠近車床主軸的入口，艾恩司的棒材送料機安裝了前端防震。這個系統保證旋轉中整支棒材都不會震動。前端防震可視為棒材進入車床主軸前所接觸的最後一段料管。

**Synchronization (TW PATENT I311090)**

LNS synchronization is an electronic system which enables the movements of the headstock to be synchronized to those of the loader pusher. By means of a servo motor controlled by an SPS, the loader detects and anticipates movements of the headstock. At the headstock advance speeds used on today's lathes, this is a decisive assurance to prevent bars from buckling.

**同步裝置 (台灣專利 I311090)**

艾恩司的同步裝置是一套能使押棒與車床主軸同步移動的電子系統。利用SPS控制的伺服馬達，料機可偵測並預先感知主軸的移動。在今日車床主軸高轉速的情況下，此裝置能確實避免棒材彎曲。

**Straightness**

If a bar is not straight, it can create vibrations as it rotates, and thus affects performance. Above 0.5mm per meter, a bar is not considered straight.

- The bars can be bent along their entire length.
- The bars be bent at the end as a result of the manufacturing process. In this case it is advisable to lathe the bent end first in order to avoid transmitting the vibrations along the whole bar while it rotates.

**棒材直度**

若是棒材不筆直，旋轉中會產生震動，因而影響加工表現。若每公尺彎曲超過0.5 mm則視為不筆直的棒材。

- 有些棒材從頭到尾彎曲。
- 有些棒材只有一端彎曲，這是棒材製造過程中被急速切斷造成。這種情況下，下料時建議把彎曲的那端置於靠近車床主軸的方向先加工，避免棒材旋轉時產生震動。

