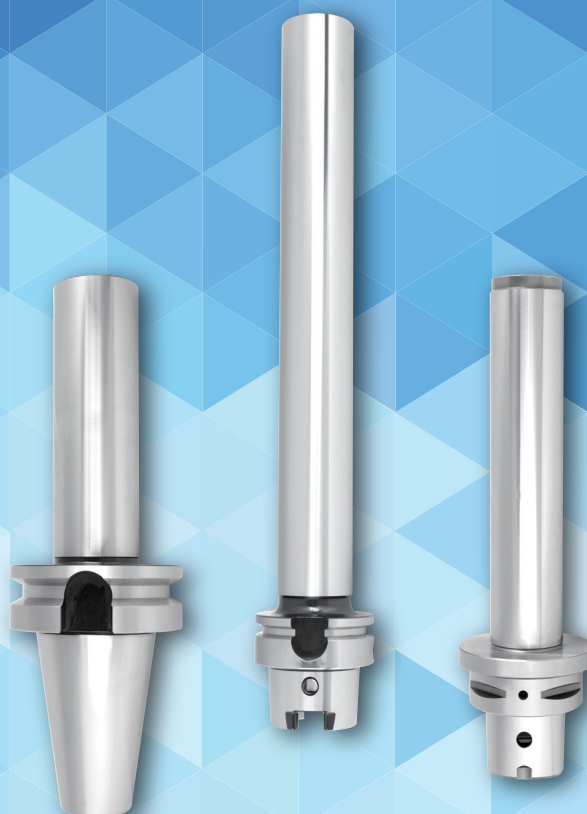




SPINDLE MASTER BAR

PRECISION TYPE 3 μ m

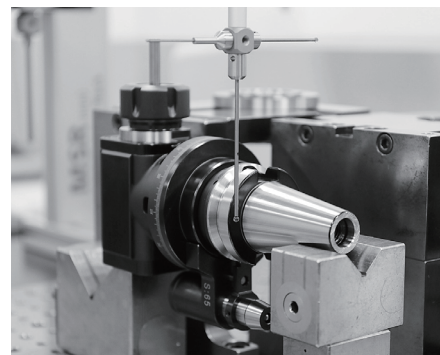
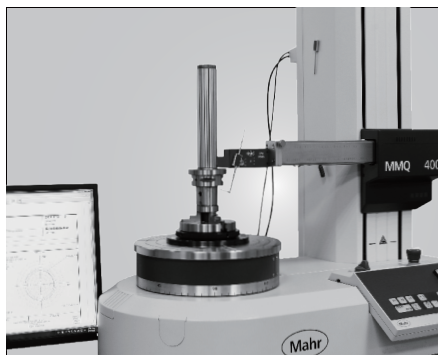
NO.2020-04



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COMPANY INTRODUCTION





品質創造信譽 信譽保證品質

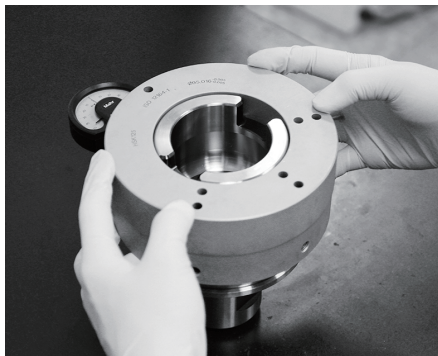
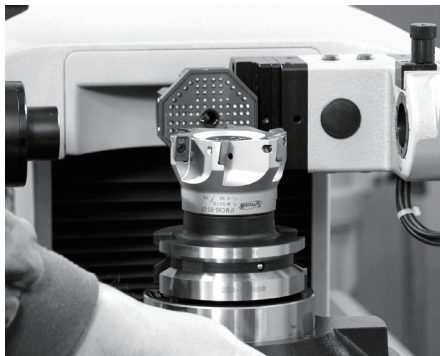
Quality creates reputation; reputation ensures quality.

About SYIC

Established in 1979, SYIC is a professional manufacturer of precise tool holders, cutting tools, angel heads, boring series and collets with more than 500 employees. The taper types of tool holders we manufacture include BT (MAS403), CAT (ANSI B5.50), DAT (DIN69871-A), HSK (DIN69893), PSC (ISO26623-1), VDI (DIN ISO10889) and straight shank holders.

SYIC is certified to ISO9001 and ISO14001. With contribution to the design, production and sale of high accuracy and inventive products, SYIC has over 300 pieces of patents worldwide. SYIC keeps investing in high-end equipment and measuring instruments from Japan and Europe to implement excellent quality control and manufacturing capability.

SYIC keeps the core value "Quality creates reputation; reputation ensures quality" to impress our customers, possessing professional technical skills to provide comprehensive solutions for customers, improving customers' machining efficiency, and enhancing the mutual competitiveness with customers. Based on the mission of "Excellent service, supreme quality," SYIC will continue to launch more high precision products to customers.



Tool Holders

Your reliable partner!

————— CNC turning, milling and grinding —————



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供需平衡 共榮共存

Maintain the balance of suppliers and customers and grow together.

未來之路 無限寬廣

Create a great future with infinite opportunities.

營運獲利 永續經營

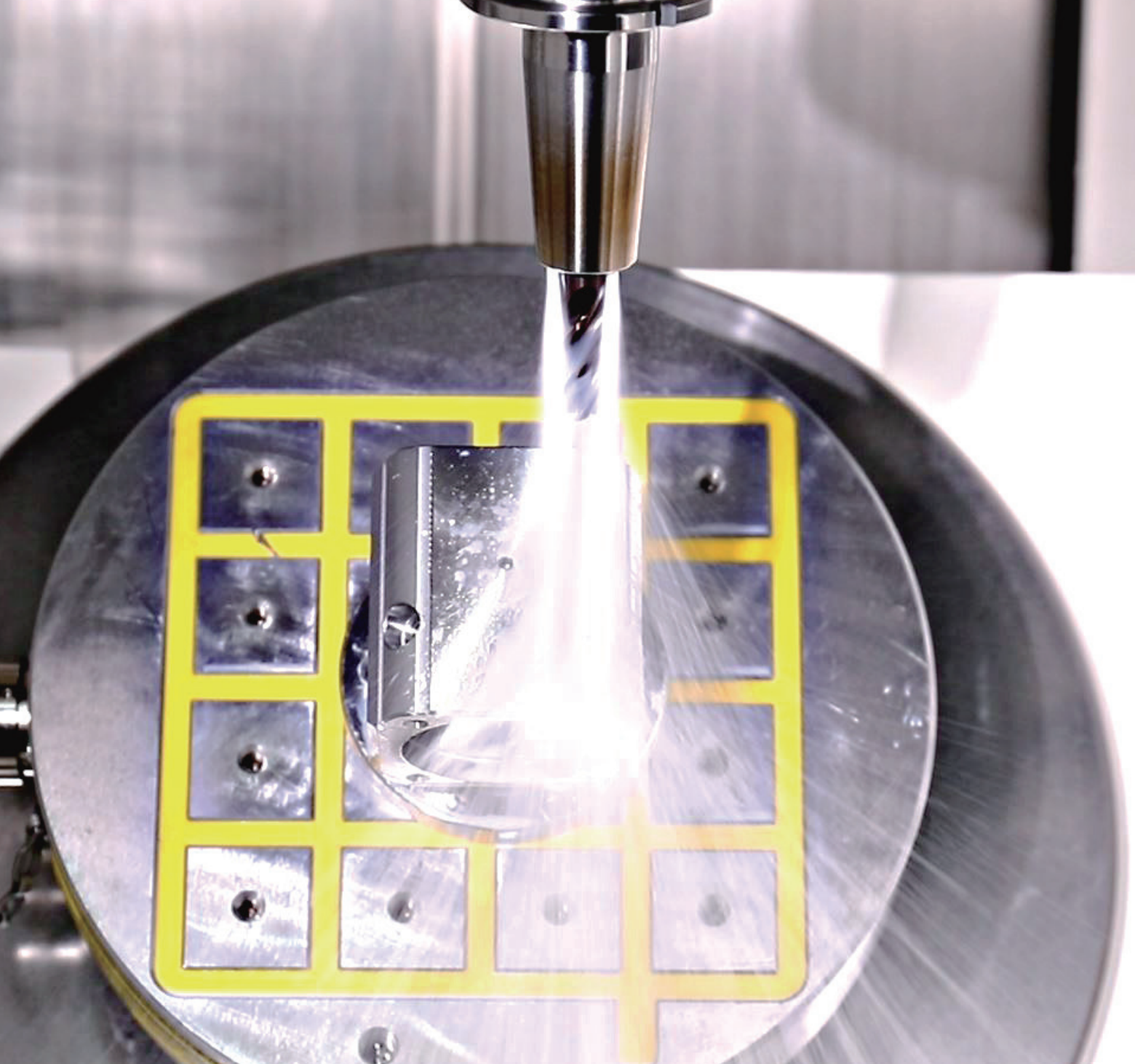
Run a profitable company with sustainable development.

合作到底 共創通贏

Keep everlasting cooperation and together create a win-win situation.

成就彼此 榮耀一切

Support each other and accomplish mutual success.



Innovation is our mission!

SYIC is committed to developing high precision products to optimize the machining process and offering professional technical service. With experienced technical professionals, our products are developed in response to different types of industries. We aim to achieve customers' demands from different industries including machining industry, mold and die industry, aerospace industry, automotive industry, and energy industry. We offer the most professional and technical service, effectively resolve your machining problems to create maximum production efficiency.

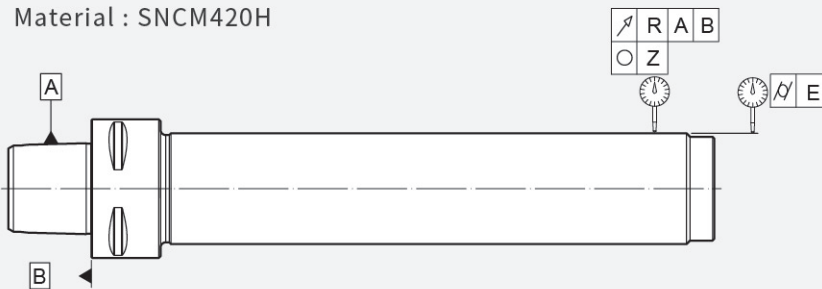
SPINDLE MASTER BAR

PRECISION TYPE



Regular inspection of machine spindles is an extremely important step to realize high precision machining!

Material : SNCM420H



TAPER SHANK PRECISION	AT2
ROUNDNESS	0.8µm
SURFACE ROUGHNESS	Ra < 0.15µm
RUNOUT ACCURACY	3µm
CYLINDRICITY	5µm

100% GUARANTEED PRECISION:

Every spindle master bar is inspected with high precision instrument and delivered with an inspection report. 100% quality guaranteed !

Inspection Report

MODEL NO :
COMMODITY :
TYPE :

SYIC account 1
PRECISION File 101

Technical drawing of the spindle master bar with inspection points A, B, R, Z, and E.

ITEM EXAMINED	APPROVED TOLERANCE	TEST VALUE
R		
Z		
E		
Surface roughness		

Operator: DATE:

Perthometer M1
Object
Name

Lt 5.600 mm
Ls Standard 2.5 µm
Lc 0.800 mm
Ra 0.095 µm
Rz 0.81 µm
Rmax 0.92 µm



What are the benefits of using Spindle Master Bar?



- 1 Optimal for checking machine spindle runout accuracy.
- 2 Checking spindle accuracy maximizes tool holder performance and increases productivity.
- 3 Ensures the machining precision and prolong the tool life.
- 4 Helps detect potential problems of spindle and saves downtime and costly repair cost.

Tool Holder Performance ↑

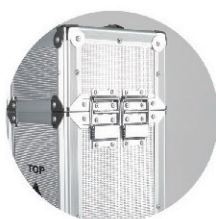
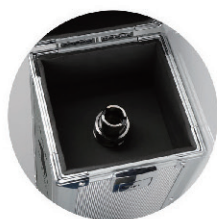
Tool Life ↑

Machining Productivity ↑

Recommendation of storage:

It's recommended to store in stock vertically to prevent deformation.

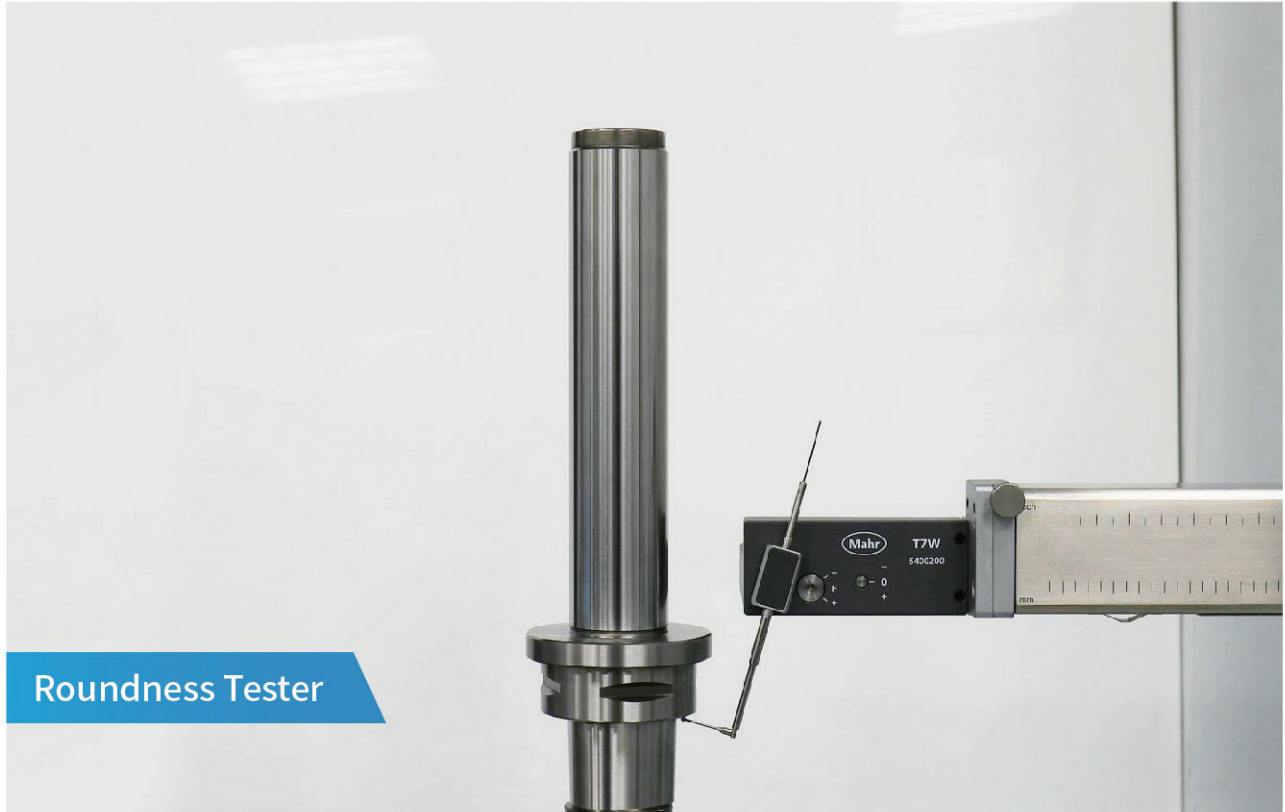
Every spindle master bar is delivered with an aluminum box for vertical storage.



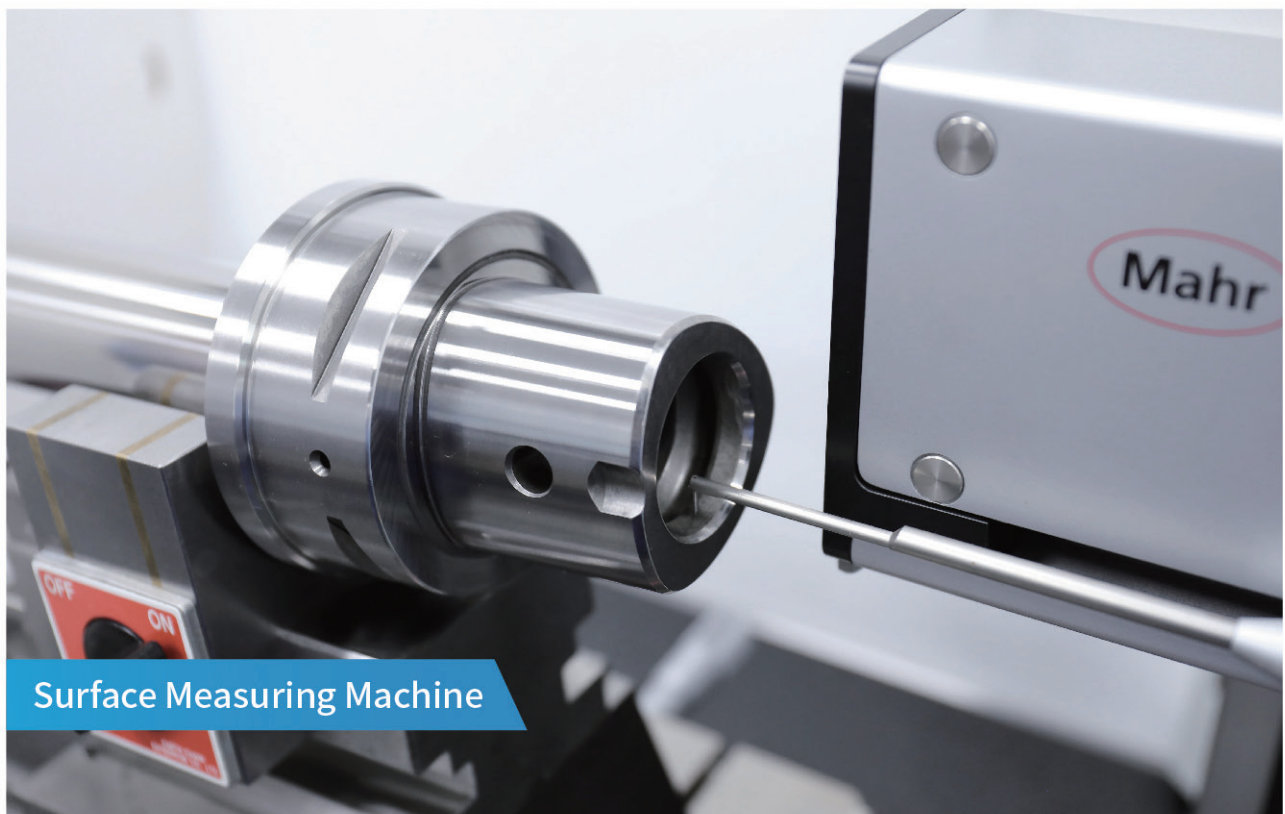
WATCH MORE



■ Measurement for PSC Spindle Master Bar



Roundness Tester



Surface Measuring Machine

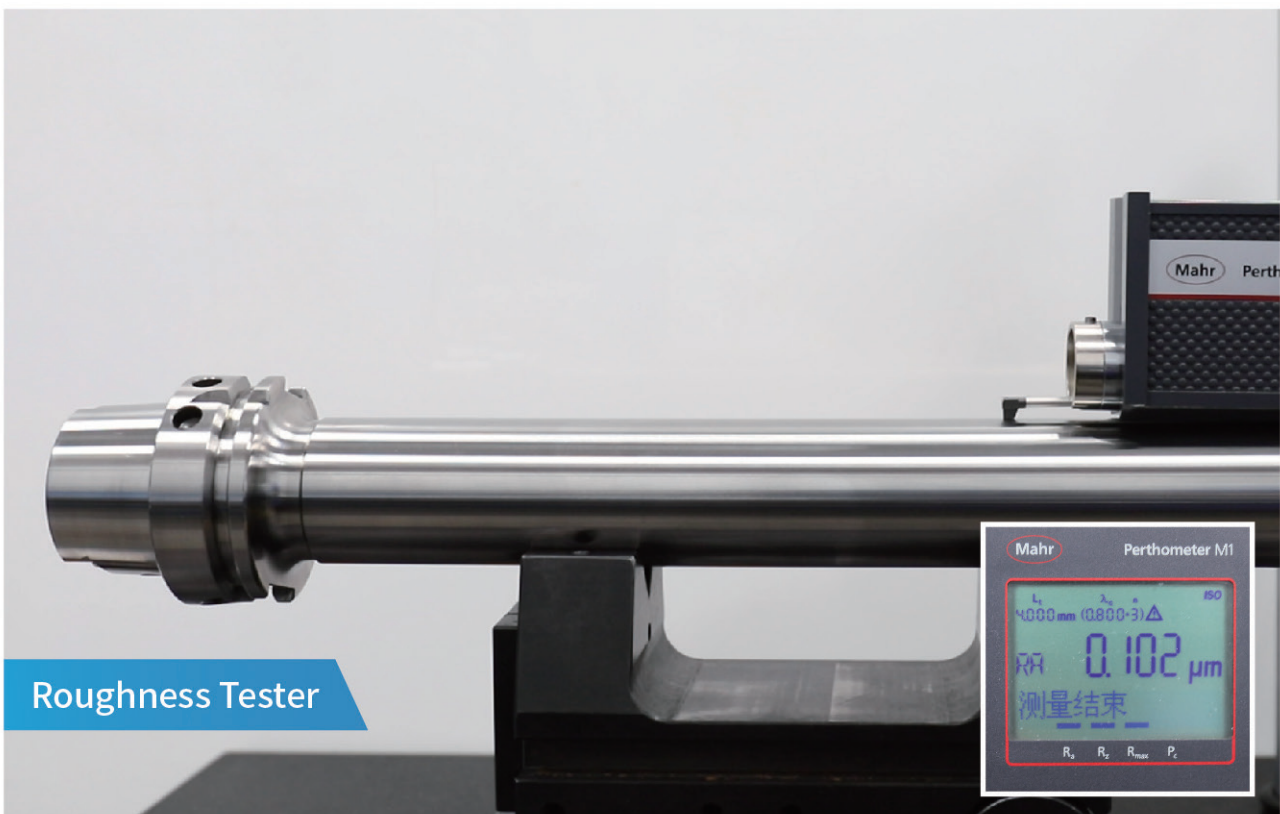
WATCH MORE



■ Measurement for HSK Spindle Master Bar



Coordinate Measuring Machine



Roughness Tester

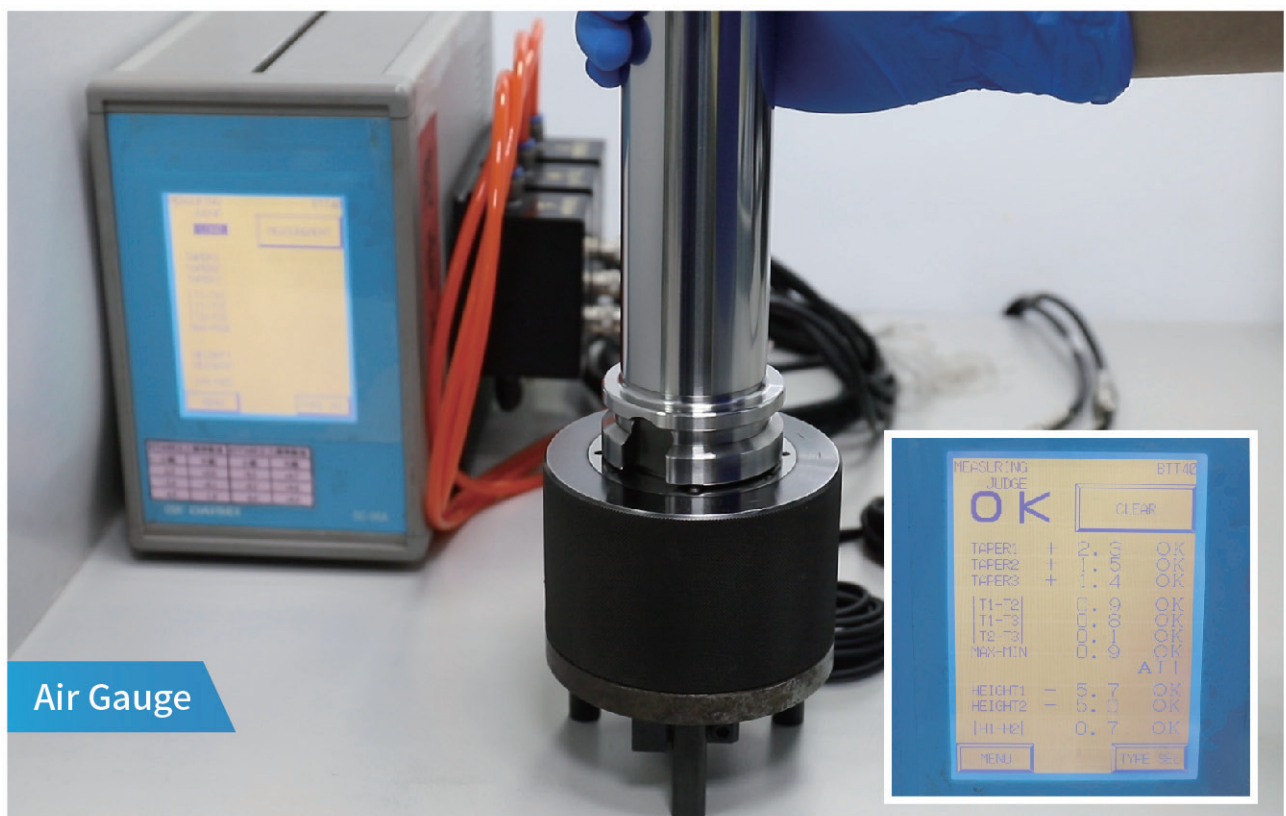
WATCH MORE



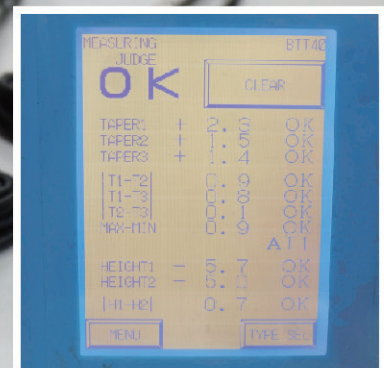
Measurement for SBT Spindle Master Bar



Roundness Tester



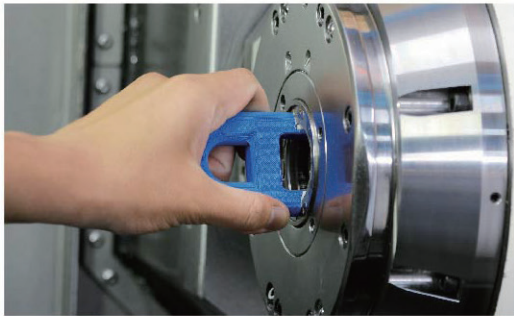
Air Gauge





How to measure spindle run-out accuracy using Spindle Master Bar?

STEP 1



Clean the machine spindle.

STEP 2



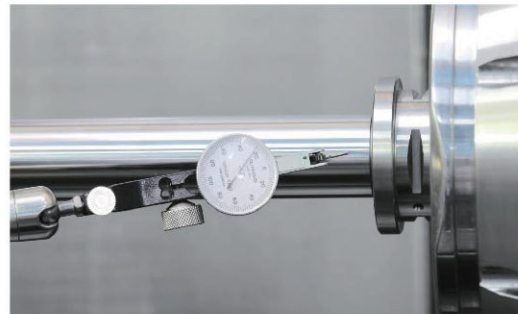
Wipe down the taper of spindle master bar.

STEP 3



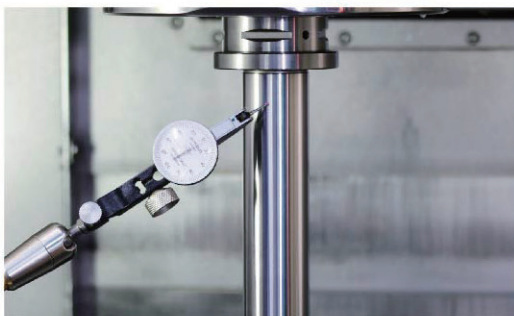
After loading the spindle master bar into spindle, wipe down the straight shank.

STEP 4



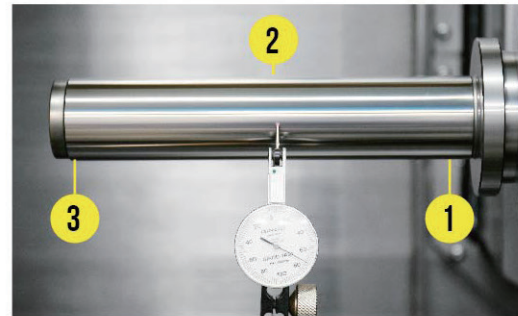
Measure parallel accuracy of spindle on datum of shank top.

STEP 5



Measure vertical accuracy of spindle on datum of shank top.

STEP 6

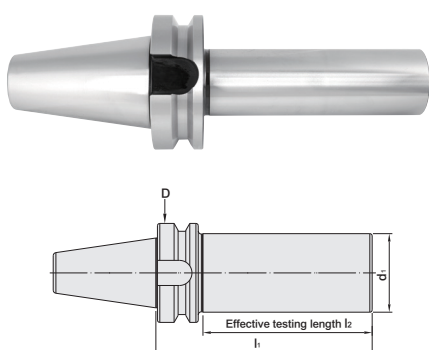
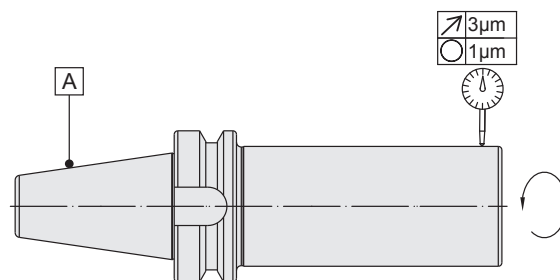


Measure the run-out of three parts of shank top, middle and bottom.

SPINDLE MASTER BAR

主軸精密標準棒

TAPER SHANK PRECISION	AT2
ROUNDNESS	1μm
SURFACE ROUGHNESS	Ra < 0.15μm
RUNOUT ACCURACY	3μm
CYLINDRICITY	5μm



SBT SERIES

MODEL NO.	TYPE	l ₁	l ₂	D	d ₁	WEIGHT (KGS)
5002-025-025-250	SBT30 x 25 - 250	250	225	46	25	0.91
5002-025-032-150	SBT30 x 32 - 150	150	125	46	32	1.09
5002-025-032-235	SBT30 x 32 - 235	235	210	46	32	1.57
5002-025-032-300	SBT30 x 32 - 300	300	276	46	32	1.91
5002-026-040-300	SBT40 x 40 - 300	300	270	63	40	2.52
5002-026-050-200	SBT40 x 50 - 200	200	170	63	50	2.94
5002-026-050-350	SBT40 x 50 - 350	350	320	63	50	4.64
5002-027-050-200	SBT50 x 50 - 200	200	159	100	50	5.28
5002-027-050-360	SBT50 x 50 - 360	360	319	100	50	7.10

SCAT SERIES

5002-043-050-300	SCAT40 x 50 - 300	300	277.95	63.5	50	4.03
5002-044-050-300	SCAT50 x 50 - 300	300	280	98.425	50	6.88

SDAT SERIES

5002-066-050-200	SDAT40 x 50 - 200	200	170	63.55	50	2.98
5002-066-050-340	SDAT40 x 50 - 340	340	310	63.55	50	4.96
5002-067-050-200	SDAT50 x 50 - 200	200	178	97.5	50	4.67
5002-067-050-340	SDAT50 x 50 - 340	340	318	97.5	50	6.43



Reminder:

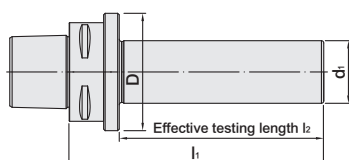
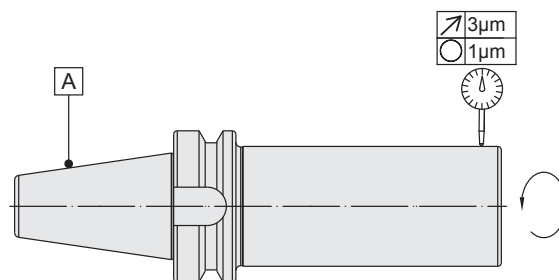
- ▶ Spindle Master Bar is supplied with an aluminum box for vertical storage.
- ▶ It's recommended to store in stock vertically to prevent deformation.
- ▶ The runout precision 5μm is available upon request. Please inform the sales personnel when ordering.



SPINDLE MASTER BAR

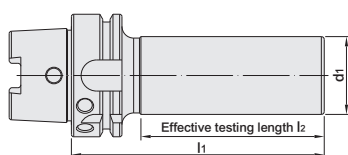
主軸精密標準棒

TAPER SHANK PRECISION	AT2
ROUNDNESS	1μm
SURFACE ROUGHNESS	Ra < 0.15μm
RUNOUT ACCURACY	3μm
CYLINDRICITY	5μm



PSC SERIES

MODEL NO.	TYPE	l ₁	l ₂	D	d ₁	WEIGHT (KGS)
5002-140-020-180	PSC32 x 20 - 180	180	165	32	20	0.41
5002-141-032-180	PSC40 x 32 - 180	180	160	40	32	1.08
5002-142-032-180	PSC50 x 32 - 180	180	150	63	32	1.38
5002-142-032-245	PSC50 x 32 - 245	245	215	63	32	1.70
5002-142-040-280	PSC50 x 40 - 280	280	250	63	40	2.12
5002-143-040-182	PSC63 x 40 - 182	182	150	75	40	1.93
5002-143-040-232	PSC63 x 40 - 232	232	200	75	40	4.02
5002-143-040-352	PSC63 x 40 - 352	352	320	75	40	2.93
5002-144-040-240	PSC80 x 40 - 240	240	200	75	40	3.26
5002-144-040-320	PSC80 x 40 - 320	320	280	85	40	3.74
5002-144-040-360	PSC80 x 40 - 360	360	320	85	40	3.98



HSK-A SERIES

MODEL NO.	TYPE	l ₁	l ₂	d ₁	WEIGHT (KGS)
5002-069-020-150	HSK25A x 20 - 150	150	138	20	0.30
5002-070-024-180	HSK32A x 24 - 180	180	158	24	0.59
5002-070-025-150	HSK32A x 25 - 150	150	125	25	0.50
5002-071-032-180	HSK40A x 32 - 180	180	157	32	0.96
5002-071-032-200	HSK40A x 32 - 200	200	170	32	2.86
5002-071-032-300	HSK40A x 32 - 300	300	270	32	1.77
5002-072-032-150	HSK50A x 32 - 150	150	121	32	1.02
5002-072-032-240	HSK50A x 32 - 240	240	211	32	1.44
5002-072-032-300	HSK50A x 32 - 300	300	274	32	2.83
5002-073-040-200	HSK63A x 40 - 200	200	171	40	1.78
5002-073-040-346	HSK63A x 40 - 346	346	300	40	3.66
5002-073-050-200	HSK63A x 50 - 200	200	171	50	2.75
5002-073-050-350	HSK63A x 50 - 350	350	321	50	4.49
5002-074-040-346	HSK80A x 40 - 346	346	311	40	2.96
5002-074-050-200	HSK80A x 50 - 200	200	168	50	3.13
5002-074-050-350	HSK80A x 50 - 350	350	318	50	4.83
5002-075-040-349	HSK100A x 40 - 349	349	300	40	7.61
5002-075-050-200	HSK100A x 50 - 200	200	168	50	4.01
5002-075-050-329	HSK100A x 50 - 329	329	280	50	5.37
5002-075-050-350	HSK100A x 50 - 350	350	318	50	5.73
5002-076-050-349	HSK125A x 50 - 349	349	300	50	6.89
5002-076-063-361	HSK125A x 63 - 361	361	322	63	9.99

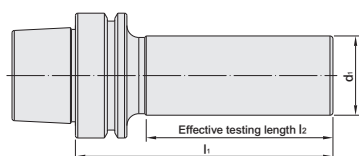
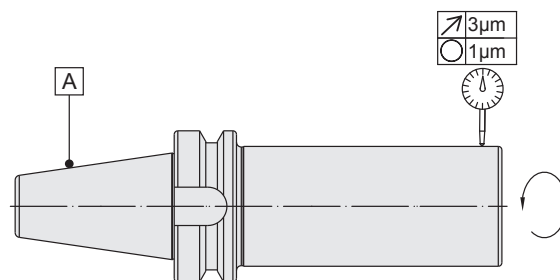
Reminder:

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- ▶ The runout precision 5μm is available upon request. Please inform the sales personnel when ordering.

SPINDLE MASTER BAR

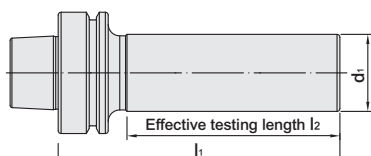
主軸精密標準棒

TAPER SHANK PRECISION	AT2
ROUNDNESS	1 μ m
SURFACE ROUGHNESS	Ra < 0.15 μ m
RUNOUT ACCURACY	3 μ m
CYLINDRICITY	5 μ m



HSK-E SERIES

MODEL NO.	TYPE	l ₁	l ₂	d ₁	WEIGHT (KGS)
5002-097-020-175	HSK25E x 20 - 175	175	163	20	0.36
5002-097-025-175	HSK25E x 25 - 175	175	163	25	0.58
5002-098-020-180	HSK32E x 20 - 180	180	158	20	0.41
5002-099-032-180	HSK40E x 32 - 180	180	157	32	2.98
5002-100-032-180	HSK50E x 32 - 180	180	151	32	3.70
5002-100-032-240	HSK50E x 32 - 240	240	211	32	1.59
5002-101-040-335	HSK63E x 40 - 335	335	300	40	2.44
5002-101-050-200	HSK63E x 50 - 200	200	171	50	2.72
5002-101-050-350	HSK63E x 50 - 350	350	321	50	4.42
5002-107-050-200	HSK80E x 50 - 200	200	171	50	3.17
5002-107-050-350	HSK80E x 50 - 350	350	321	50	4.87



HSK-F SERIES

MODEL NO.	TYPE	l ₁	l ₂	d ₁	WEIGHT (KGS)
5002-106-032-180	HSK40F x 32 - 180	180	157	32	0.97
5002-102-032-240	HSK50F x 32 - 240	240	211	32	1.43
5002-103-040-346	HSK63F x 40 - 346	346	300	40	4.48
5002-103-040-335	HSK63F x 40 - 335	335	300	40	2.45
5002-103-050-200	HSK63F x 50 - 200	200	171	50	2.66
5002-103-050-350	HSK63F x 50 - 350	350	321	50	4.39
5002-104-050-200	HSK80F x 50 - 200	200	171	50	3.09
5002-104-050-350	HSK80F x 50 - 350	350	321	50	4.79

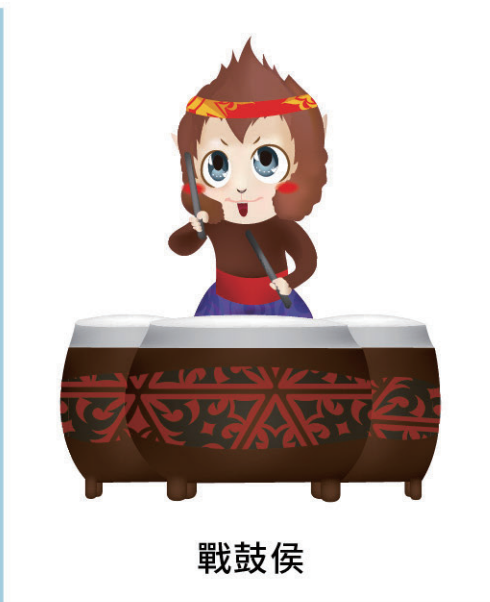
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