

GENERAL MACHINE SHAFTING

NB general machine shafts are made to customer drawings. Integrated production from material sourcing, machining, heat treatments, surface treatments and final inspection, NB does it all.

ADVANTAGES

Small Lot Production Accepted

One piece custom accepted.

Variety of Machining Capabilities

From small to large, various shaft and spindle machining is available.

Surface Treatment

Various surface treatments are available such as hard chrome, electroless nickel plating, and low temperature black chrome.

Heat Treatment

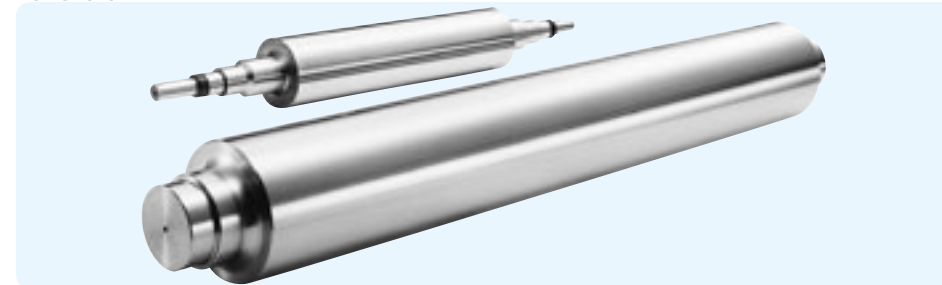
Various heat treatments are available such as carburizing and induction hardening.

Materials	High Carbon Chromium Bearing Steel (SUJ2)	Surface Treatment	Hard Chrome
	Chrome Molybdenum Steel (JIS SCM415, 420, 435)		Low Temperature Black Chrome
	Structural Carbon Steel (JIS S45C)		Electroless Nickel Plating
	Martensite Stainless Steel (SUS440)		Thermal Spray Ceramic Coating
	Austenite Stainless Steel (SUS303, 304)		Others
	Tool Steel (JIS SK4)	Triangular and trapezoidal thread grinding available	
	Tool Steel (JIS SKS3)		
Heat Treatment	Induction Hardening		
	Induction Hardening (deep)		
	Carburizing and quenching		

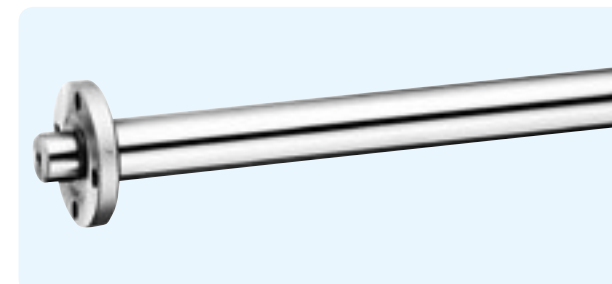
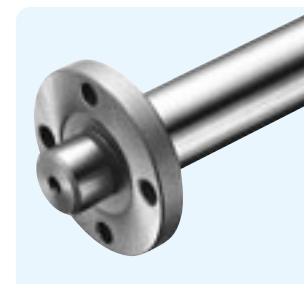
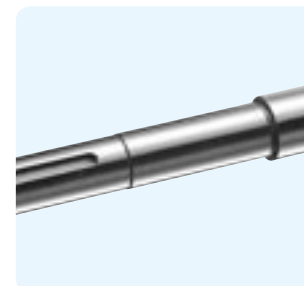
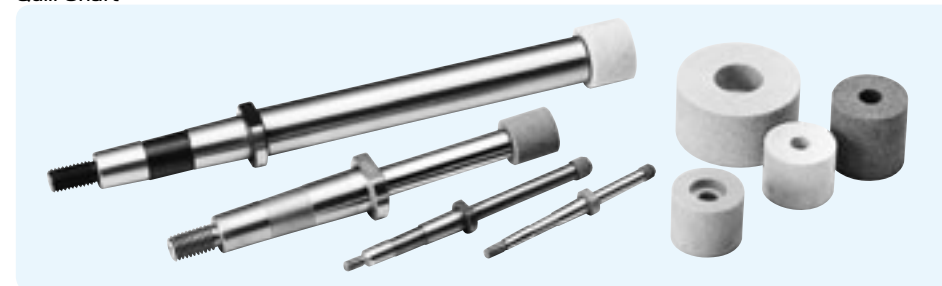
Machining Ability	Process Details / Manufacturing Contents	Maximum Machinable Diameter	Maximum Machinable Length	Remarks / Notes
	Centerless Grinding	φ60 mm outer diameter	4000mm	
	External Grinder	φ640 mm outer diameter	6000mm	
	Internal Grinder	φ200 mm inner diameter	300mm	Allowable work length: up to 1100 mm
		φ350 mm inner diameter	300mm	
	Vertical Grinder	φ630 mm outer diameter	300mm	
	Lathe	φ400	3800mm	
	Horizontal Machining Center	φ350	2000mm	Up to 3000 kg
Vertical Machining Center	φ300	3000mm	Up to 3000 kg	
BT / Gun Drilling	φ80	2000mm	Up to 4000 mm long with both end machining for less than φ120 Up to 2000 mm long for φ120 and over	

EXAMPLES OF MACHINING ①

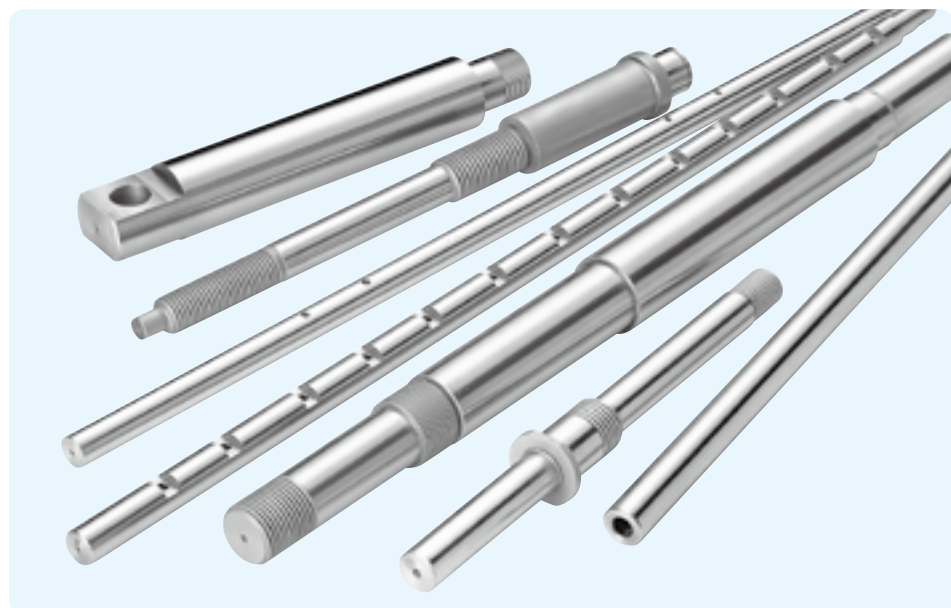
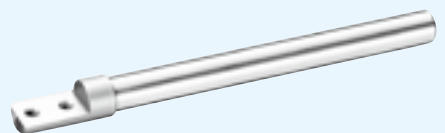
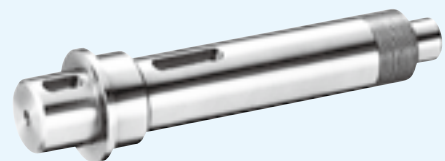
Roll Shaft



Quill Shaft



EXAMPLES OF MACHINING ②



Please visit at NB Website for more examples of machining.

SLIDE WAY SLIDE TABLE MINIATURE SLIDE GONIO WAY

SLIDE WAY

STRUCTURE AND ADVANTAGES	G-2
TYPES	G-3
ACCURACY	G-4
RATED LIFE	G-4
LOAD RATING	G-4
STROKE	G-6
LUBRICATION AND DUST PREVENTION	G-6
MOUNTING	G-6
INSTALLATION PROCEDURE OF NV TYPE	G-7
INSTALLATION PROCEDURE OF SV TYPE	G-8
SPECIAL MOUNTING SCREW BT TYPE	G-9
USE AND HANDLING PRECAUTIONS	G-9
DIMENSION TABLE	G-10~

SLIDE TABLE

STRUCTURE AND ADVANTAGES	G-26
TYPES	G-27
ACCURACY	G-27
RATED LIFE	G-28
LOAD RATING	G-28
USE AND HANDLING PRECAUTIONS	G-28
SPECIAL REQUIREMENTS	G-29
DIMENSION TABLE	G-30~

MINIATURE SLIDE

STRUCTURE AND ADVANTAGES	G-52
ACCURACY	G-53
LOAD RATING	G-53
RATED LIFE	G-53
MOUNTING	G-54
USE AND HANDLING PRECAUTIONS	G-55
DIMENSION TABLE	G-56~

GONIO WAY

STRUCTURE AND ADVANTAGES	G-58
ACCURACY OF RVF TYPE	G-59
ACCURACY OF RV TYPE	G-59
RATED LIFE	G-59
MOUNTING OF RVF TYPE	G-60
MOUNTING OF RV TYPE	G-62
RVF TYPE 2 AXES AND SPECIAL REQUIREMENTS	G-64
USE AND HANDLING PRECAUTIONS	G-65
DIMENSION TABLE	G-66~