

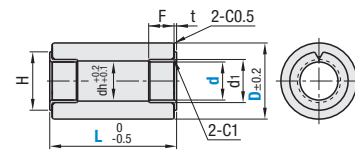
Features: Use of oil free bushings instead of bearings accomplished lower cost and space savings.



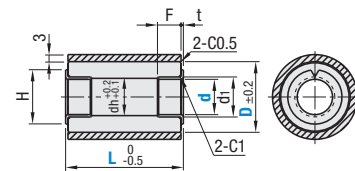
RoHS 10

Type	Roller		Oil Free Bushings
	Material	Surface Treatment	
FRTA	Aluminum Alloy	Clear Anodize	Filler Added PTFE Layer Sintered Bronze Layer Steel-backed Metal Layer (Low Carbon Steel: Tin Plating)
FRTS	304 Stainless Steel	—	
FRTAU	Aluminum Alloy	Urethane Lining	
FRTSU	304 Stainless Steel	(Natural Color) Shore A90	

Core Only



Urethane Lined



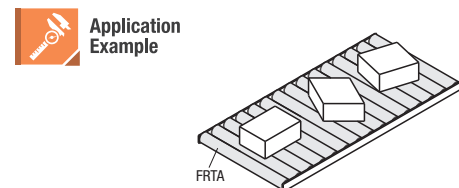
Bushing Details

Inner Diameter	d		F	d ₁	H
	Tolerance				
3	+0.062	0	5	4.6	7
5	+0.065	0	5	7	10
6			8	8	12
8	+0.068	0	10	10	15
10			10	12	18
12			10	14	20
15			10	17	23

⊖ For L20, oil free bushing F dim. will be 10 or less.

Part Number Type	D	d (I.D.)				L					t
		8	10	12	15	20*	25	30	40	50	
Core Only FRTA (Aluminum Alloy)	8	3									0.8
	10		5								
Urethane Lined FRTAU (Aluminum Alloy)	12		5	6							1.0
	15			6	8						
FRTS (304 Stainless Steel)	18				8	10					1.0
	20					10	12				
FRTSU (304 Stainless Steel)	25						10	12	15*		1.0
	30							10	12	15*	

*For details of Oil Free Bushings, please see P.441. ⊖ L20 cannot be selected for *d15.



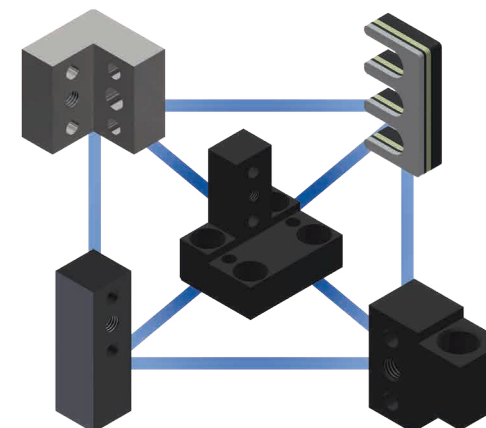
The MISUMI Approach to Standard & Configurable NAAMS

After extensive market research, MISUMI USA discovered that standard NAAMS components frequently required additional machining, or even a make detail for customization. MISUMI USA worked closely with several large customers to develop configurable NAAMS components that required no additional machining, not connected to each other, and at a lower cost than customized NAAMS components.

NAAMS Bolting Pattern

The NAAMS bolting pattern is a unique benefit of the NAAMS standards. The bolting pattern is standardized with a 15mm pitch, so components are easily interchangeable and assembly is quick and easy.

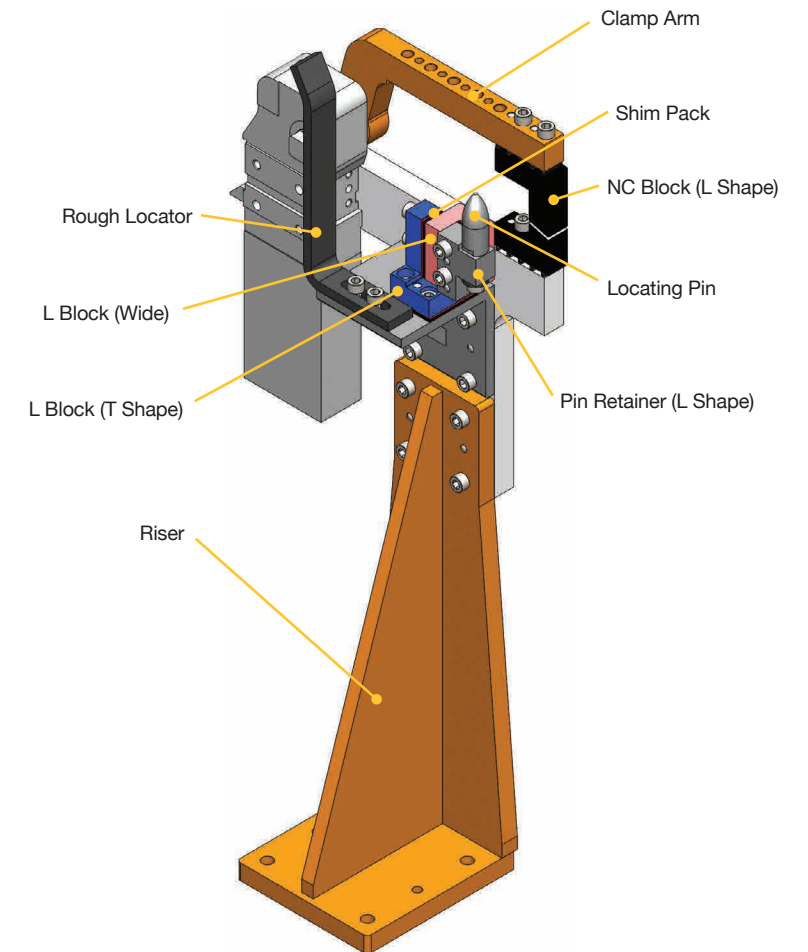
Mix and match components



All 15mm pitch =
Interchangeable Bolting Pattern
& Easy Assembly

Typical NAAMS Assembly

A typical NAAMS assembly includes risers, pin stacks, and clamp arms and uses multiple locating pins and pin retainers, in addition to several styles of L Blocks and NC Blocks. Shim packs are used to adjust the assembly as needed.



WHAT'S NEW

MISUMI has further expanded our NAAMS offering by adding the following new products:

- American-made NAAMS Welded Risers
- Douglas Stamping Company® NAAMS Shims & Spacers
- Suburban Bolt Supply Company NAAMS Fasteners

We have also added options on existing products by adding more Configurable L Blocks and Pin Retainers. For Locating Pins, we have expanded the diameter range on configurable pins and added a Rainbow Diamond-Like Coating to select items.