

# Applications

## Custom Dispensing



[1] × [A+B+J]

## Optical Device Component



[1] × [A+B]

## Medical Device



[8] × [A]

**PRECISION  
MACHINING  
TECHNOLOGIES**

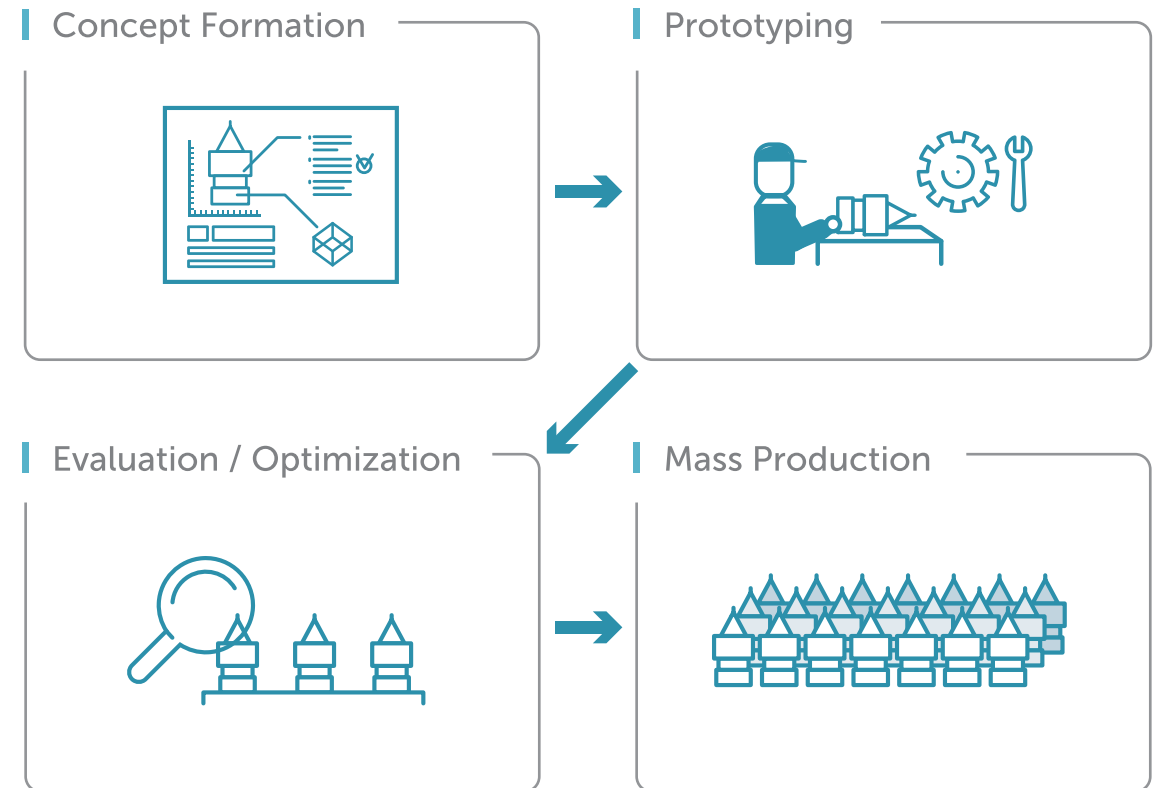
# We Bring Your Ideas To Life.



Tecdia has accumulated over 40 years of experience in machining technologies through manufacturing of diamond tools, precision nozzles, and unique customer designs. Our products are used in many industries including but not limited to optical, biomedical, aerospace, camera module, and semiconductor processing.

## We are equipped to support sample builds to mass production.

Tecdia offers a one stop service from prototyping to mass production with low cost and quick turnaround.



# General Capabilities

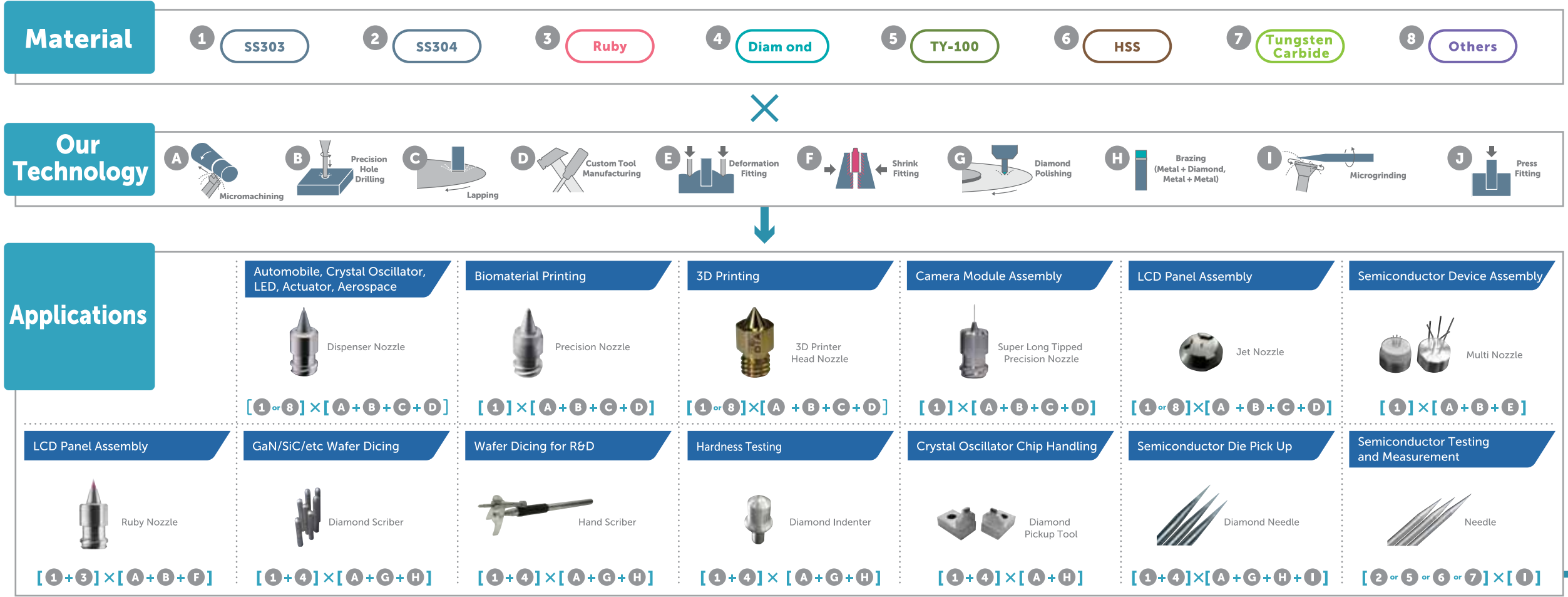
Machine Type	Skills			Typical Materials
Milling / Drilling	Precision Hole Drilling	Ultra - Small Hole Drilling	φ0.030 mm (Max. 2.5D)	SS303
		Small Hole Drilling	φ0.030 to φ0.090 mm (Up to 10D)	
	General Processing	Hole Drilling	φ0.10 to φ12.0 mm	SS, Steel, POM*, Ti, Al etc.
		Reaming	φ2.0 to φ12.0 mm	
Tapping		M3 to M12		
End Milling	Cylindrical Processing	φ0.080 mm ± 0.005 mm	SS303	
Lathe Processing	Precision Hole Drilling	Ultra - Small Hole Drilling	φ0.030 to φ0.090 mm	SS303
		Hole Drilling	φ0.10 to φ0.90 mm	SS, Steel, POM*, Ti, Al etc.
	General Processing	Hole Drilling	From φ1.0 mm	SS, Steel, POM*, Ti, Al etc.
		Reaming	From φ3.0 mm	
		Tapping	M3 to M10	
	Micromachining	Cylindrical Processing	φ0.20 mm ± 0.02 mm (Max. 5.5D)	SS303
Microgrinding	O.D. Processing	Tapering	From 15°	SS, Tungsten Carbide, Steel, Brass, HSS, TY-100 etc.
		Tip Rounding	R = 0.010 μm ± 0.005 μm	
	Custom Tool Manufacturing	Tapering	From 15°	
		Cylinder Forming	φ1.0 to φ10 mm (± 0.003 mm accuracy)	
Sawing Machine	Cutting	-	Diamond, Sapphire, Quartz etc.	
Lapping Machine	Lapping	▽▽▽FL	SS303, HPM38, Ruby	

Processing Type	Skills			Typical Materials
Surface Treatment	Liquid Repelling	AEGIS Coating		SS, Steel
	Other Treatment Methods	Tempering		HPM38
Gas Nitriding				
Adhesion Technology	Adhering	POM* + Metal or Metal + Metal		SS, Tungsten Carbide
	Welding	YAG Laser Spot Welding		SS
	Brazing	Diamond + Metal Attachment		Diamond, Tungsten Carbide, Steel
	Ceramic Bonding	-		Diamond, Quartz
	Deformation Fitting	-		SS
	Shrink Fitting	Ruby + Metal Attachment		SS, Ruby, Tungsten Carbide, Steel
Press Fitting	-		SS	
Diamond Polishing	Pyramid Machining	Conical	60° angled tip, 5 μm tip flat	Diamond
		Square	Tip Alignment < 1 μm	
		Triangular	Tip R < 0.1 μm (100 nm)	
	Tip Machining	Tip Rounding	R = 10 μm to 1.0 mm	
		Sharpening	40°	
	O.D. Machining	Thin Sheets	t = 50 μm	
Oblong Rod		□ 100 μm or larger		

POM\* = Poly oxy methylene  
 TY-100\*\* = Au - Pt - Pd - Ag alloy

# Ideas Brought to Life: Through Materials and Precision Manufacturing.

The sky is the limit. The combination of our experience with a variety of materials and our expertise in micromachining technologies results in limitless possibilities. We are well equipped to handle customized ideas.



Continue!