



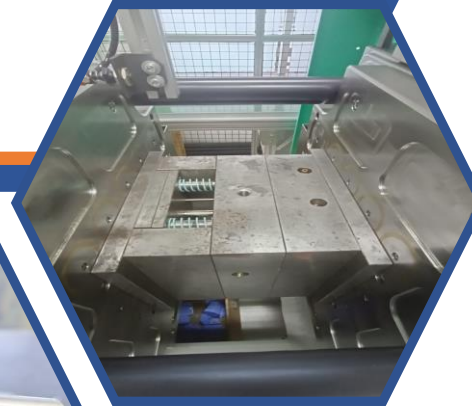
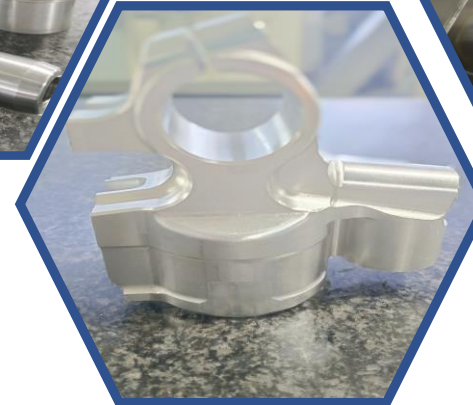
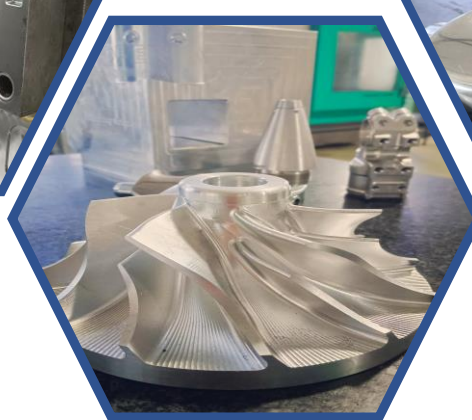
Thai-German Institute
สถาบันไทย-เยอรมัน

❖ **Part Design , Prototyping & Production**

❖ **Mould , Die Design & Making**

TGI – MACHINE LIST

For Industrial Service





TGI Thai-German Institute
สถาบันไทย-เยอรมัน

MACHINING CENTER & CNC MACHINE

MACHINE LIST

No.	MACHINE TYPE	BRAND	MODEL	CAPACITY (mm)	SPINDLE (RPM)	UNIT	ACCURACY OF MACHINE (mm)
1	CNC Milling	DMG	DMC 635V	635 x 510 x 460	10,000	2	± 0.005
2	CNC Milling 5Axis	Mikron	UCP800DURO	800 x 650 x 500	20,000	1	± 0.005
3	CNC Milling	Mikron	VCP 600	600 x 450 x 450	10,000	1	± 0.005
4	CNC Milling	Mikron	VCP 800	800 x 650 x 500	42,000	1	± 0.005
5	CNC Milling	Mikron	HSM300	380 x 390 x 255	30,000	1	± 0.005
6	CNC Milling	Mikron	VCE 1200	1200 x 600 x 675	10,000	1	± 0.005
7	CNC Milling	Haas	VF 2-SE	762 x 406 x 508	10,000	1	± 0.005
8	CNC Milling	Haas	VF 4-SE	1,270 x 508 x 635	10,000	1	± 0.005
9	Micro Milling	Roder	300	320 x 300 x 200	50,000	1	±0.005

**MACHINING
CENTER &
CNC MACHINE**

MACHINE LIST

No.	MACHINE TYPE	BRAND	MODEL	CAPACITY	SPINDLE (RPM)	UNIT	ACCURACY OF MACHINE (mm)
1	CNC Turning	DMG	CTX 210	Max. Turning Ø 380 mm. X-Axis 160 mm. Z-Axis 365 mm. Spindle bore 56/42 mm.	6,000 rpm	2	± 0.005
2	CNC Turning	DMG	CTX 310	Max. Turning Ø 505 mm. X-Axis 202 mm. Z-Axis 450 mm. Spindle bore 51 mm. Bar Capacity: 2"	6,000 rpm	1	± 0.005

**MACHINING
CENTER &
CNC MACHINE**



Thai-German Institute
สถาบันไทย-เยอรมัน

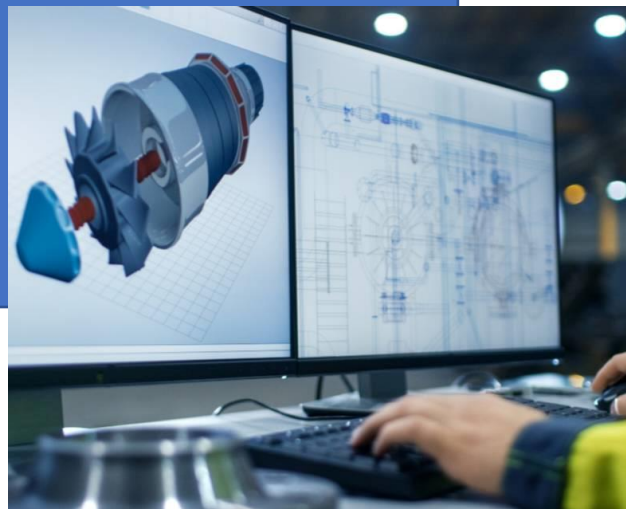
**EDM &
WIRE CUT**

MACHINE LIST

No.	MACHINE TYPE	BRAND	MODEL	CAPACITY (mm.)	Travel XYZ axis (mm.)	UNIT	ACCURACY OF MACHINE (mm)
1	Wire Cut	Agie Charmilles	Robofil 2050	1,000 x 490 x 260	320 x 220 x 160	1	± 0.005
2	Wire Cut	Agie Charmilles	Robofil 2030	1,130 x 510 x 260	318 x 218 x 114	1	± 0.005
3	3D Micro EDM	Sarix	100		300 x 150 x 200	1	± 0.002
4	EDM	Agie Charmilles	roboform 350	780 x 530 x 300	350 x 250 x 300	1	± 0.005
5	EDM	Agie Charmilles	roboform 35P	720 x 400 x 300	350 x 250 x 300	1	± 0.005

**EDM &
WIRE CUT**

The SolidWorks logo, featuring a red stylized 'S' icon followed by the word 'SOLIDWORKS' in red capital letters.



The NX logo, consisting of the letters 'NX' in a large, bold, grey sans-serif font, enclosed within a blue L-shaped frame.

Mastercam®

The TGI logo, featuring a stylized 'TGI' in blue and white, with the text 'Thai-German Institute' and 'สถาบันไทย-เยอรมัน' in blue Thai script below it.
SOFTWARE



AUTODESK®
AUTOCAD®

SOFTWARE LIST

NO	SOFTWARE	BRAND	VERSION	UNIT
1	AutoCAD	ATC (Singapore)	2023	20
2	Autodesk Inventor		2023	20
3	SolidWorks	AppliCAD	2020	10
4	NX		-	16
5	MasterCAM	Dragonsoft	-	20



Thai-German Institute
สถาบันไทย-เยอรมัน

**MANUAL
MACHINE**

MANUAL MACHINE LIST

No.	MACHINE TYPE	BRAND	MODEL	CAPACITY (mm.)	SPINDLE (RPM)	UNIT	ACCURACY OF MACHINE (mm)
1	Turning	MICRO WEILY	TY-1630S	Chuck 200	Max 2000	2	0.02 mm.
2	Turning	WEILER	Praktikant	Chuck 200	Max 2500	6	0.02 mm.
3	Milling	DECKEL MAHO	FP1	Table 290 x 150	Max 2000	3	0.05 mm.
4	Milling	DECKEL MAHO	FP4	Table 450 x 300	Max 2500	1	0.05 mm.
5	Surface Grinding	OKAMOTO	ACC52ST	Table 500 x 200	3000/Sec.	1	0.01 mm.
6	Surface Grinding	OKAMOTO	ACC52GX	Table 500 x 200	3000/Sec.	1	> 0.01 mm.
7	Surface Grinding	OKAMOTO	ACC63GX	Table 600 x 300	3000/Sec.	1	> 0.01 mm.
8	Cylindrical Grinding	Ziersch & Baltrusch	URS 75	Dia. 50 x 250	3000/Sec.	1	0.01 mm.
9	Tool Grinding	MICHAEL DECKEL	S11	Collet Dia. Max 25	-	1	-



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**MEASURING
INSTRUMENT**

MEASURING INSTRUMENT LIST



CMM	Zeiss Prismo	Prob	Vast Gold	1 Unit
		Multi Point	yes	
		Min. Probing force	50 mN	
		Active Scanning	yes	
		Max. stylus length	800 mm	
		Max. stylus weight (Incl. Adapter Plate)	600 g	
		smallest stylus tip diameter	0.3 mm	

**MEASURING
INSTRUMENT**



CNC CMM	ABERLINK	X-Axis	640 mm	1 Unit
		Y-Axis	600,900,1500 mm	
		Z-Axis	500 mm	

**MEASURING
INSTRUMENT**



MEASURING INSTRUMENT

Surface Roughness Measuring Machine	Taylor Hobson	Check Item	Specification	1
		Straightness accuracy	$\leq 0.5 \text{ }\mu\text{m}$	
		Ra Accuracy	$= 3 \text{ }\mu\text{m} \pm (2\% + 4 \text{ nm})$	
		Stylus Calibration	$\leq 0.25 \text{ }\mu\text{m}$ (Roughness)	
			$\leq 5.0 \text{ }\mu\text{m}$ (Wide Range)	



Roundness Measuring Machine Surtronic R125	Taylor Hobson AMETEK	Feature	Fast Compact Roundness Shop floor , All Manual	1 Unit
		Measuring Capacity		
		Max. Diameter	300 mm	
		Height	280 mm	
		Weight	25 kg.	
		Gauge Range / Resolution	2 mm/ 6 nm	
		Spindle	speed 15 Rpm max	
			Error $\pm$ 25 nm @ 6 Rpm	

MEASURING
INSTRUMENT



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TGI Industrial Service

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