



GESAC CUTTING TOOLS

Precision Materials, Precision Tools

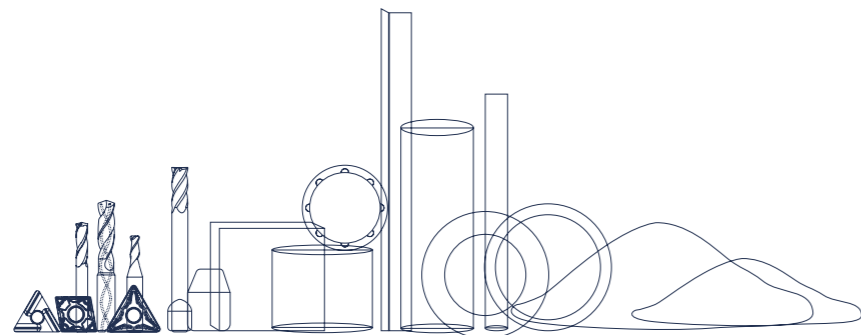
GESAC

XIAMEN GOLDEN EGRET SPECIAL ALLOY CO., LTD.



01 GESAC PROFILE

02 GESAC CUTTING TOOLS



01 GESAC PROFILE

WE ARE THE SUPPLIER OF TUNGSTEN POWDER, CEMENTED CARBIDE AND CUTTING TOOLS

Xiamen Golden Egret Special Alloy Co., Ltd. (GESAC), founded in 1989, is a Sino-foreign joint venture between Xiamen Tungsten Corporation(70%), one of six major rare earth groups in China, and A.L.M.T Corporation(30%), a subsidiary of Sumitomo Electric Industries. We are committed to the research & development and production of high-quality tungsten powder materials, cemented carbide, precision cutting tools and other tungsten products, as well as the provision of professional solutions in the industry.

GESAC BIG DATA



(By the end of 2023)



WE ARE A BACKBONE MEMBER OF XTC

Xiamen Tungsten Co., Ltd. (XTC), founded in 1958, is the largest tungsten and molybdenum production and export enterprise in China. XTC has a significant advantage in tungsten ore resources and a national tungsten materials engineering technology research center. Through over 40 years of development, XTC has built a complete chain of tungsten industry ranging from front-end tungsten mine selection, mid-end tungsten and molybdenum smelting and production of tungsten and molybdenum powders, high-end to deep processing applications such as hard alloys, tungsten and molybdenum wire and cutting tools, with many technologies leading internationally.

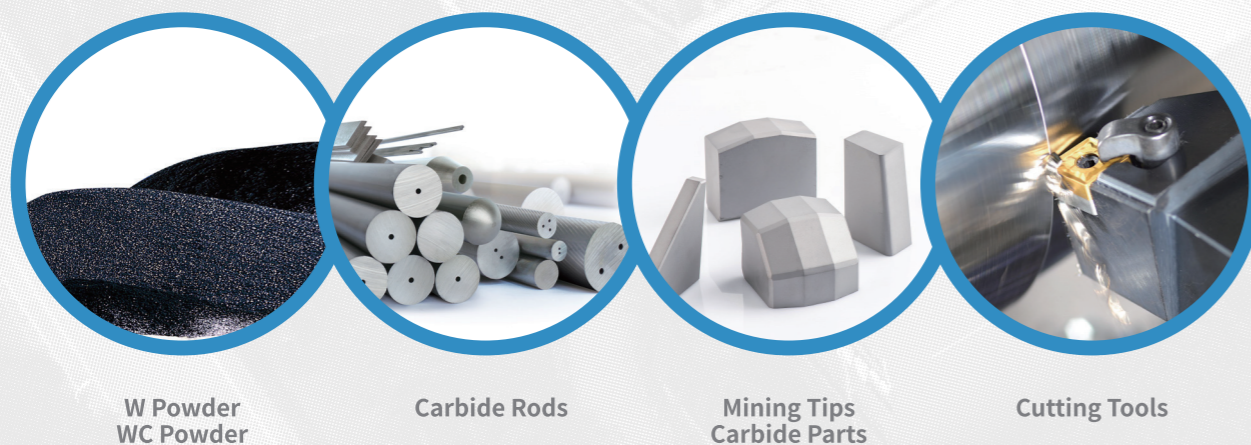


- Total Assets**
5630 Million USD
- Revenue**
5610 Million USD
- Employees**
17,549
- Holding Subsidiaries**
34
- Business Divisions**
22
- Tungsten Mines**
4 Mines
- Patents**
1698

*By the end of 2023

WE HAVE THE MOST COMPLETE TUNGSTEN INDUSTRY CHAIN

Relying on the XTC's complete tungsten processing industry chain and advanced technological platforms, GESAC provides global customers with a range of tungsten products and services with top cost performance and develops excellent products and comprehensive solutions in the modern industry.



W Powder
WC Powder

Carbide Rods

Mining Tips
Carbide Parts

Cutting Tools

02 GESAC CUTTING TOOLS

WE ARE YOUR MOST RELIABLE PARTNER

Since 2004, GESAC Cutting Tools Division has focused intensive-ly on the research and development of cutting tools for various applications. Taking advantage of the XTC's complete tungsten chain, we offer a wide range of precision tools for turning, milling, and holemaking. We also provide our customers with efficient tool solutions for various industries such as automotive, aerospace, mold, 3C, medical, general machinery, and the energy industry that will satisfy unique processing needs. Through continuous improvement of production technologies and significant investments in research and development, we are committed to providing our customers with high-quality products and comprehensive services.



GESAC Cutting Tools

5 types

300+ series

100,000+ SKUs



PRODUCT LINEUP

Turning

General Turning Tools



Learn More

Negative Turning Inserts

Workpiece material	Series	Pic	Geometry
P	G Series		GF, GM, SV
	Q Series HOT!		QF, QM, QR, QH
K	K Series		MK, UK, HK, Flat
M	S Series		SF, SM
	L Series HOT!		YF, LF, LV, LM, LR
S	SM Series		SML, SMM
	E Series HOT!		EL, EM
P M K	Turning Wiper Series		WMV

Positive Turning Inserts

Workpiece Material	Series	Pic	Geometry
P M K	General Turning Inserts		MM
			GP HOT!
			KM
N	N Series		AL

Turning

Special Turning Tools for Industry

Workpiece Material	Industry Tools Series	Series	Pic	Geometry
P M	HOT! Small Parts Turning Inserts NEW	General Geometry		P, G, S
		3D Geometry		AF, BF, AK, BK, MM
		Back Turning		GSAB, GSTB
		Parting&Grooving		GSTC, GSTS
		Threading Turning		GSTT
P	Track Turning Inserts	Railway Turning Round Inserts		RCMX
		Train Wheel Repair Inserts		LNMX
		Heavy Turning		PX, PY, PH

Turning

Threading Tools



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Item	Thread Code	Diagram	Without grinding TC-Pitch	Finishing-Pitch
General	60°		0.5-5.0(mm)	0.5-5.0(mm)
	55°		48-5(TPI)	48-16(TPI)
Metric/US	ISO		1.0-6.0(mm)	0.5-2.0(mm)
	UN		24-8(TPI)	20-7(TPI)
Pipe Thread	NPT		27-8(TPI)	27-11.5(TPI)
	W		19-11(TPI)	Development Available
	BSPT		28-11(TPI)	14-11(TPI)
Round Thread	RD(DIN304)		10-4(TPI)	10-4(TPI)
	RD(DIN20400)		-	Development Available
Trapezoidal Thread	TR		-	1.5-6.0(mm)
	ACME		-	12-4(TPI)
	STACME		-	14-4(TPI)
Buttress Thread	ABUT		-	16-10(TPI)
	BBUT		-	Development available
	SAGE		-	2-4(mm)
Oil Pipe	API		-	5-4(TPI)
	BUT		-	Development Available
	APIRD		-	10-8(TPI)
	EL		-	Development Available
Aerospace	MJ		-	1.0-2.0(mm)
	UNJ		-	32-16(TPI)
Other Thread	PG		-	Development Available
	VAM		-	Development Available
	H90		-	Development Available

Turning

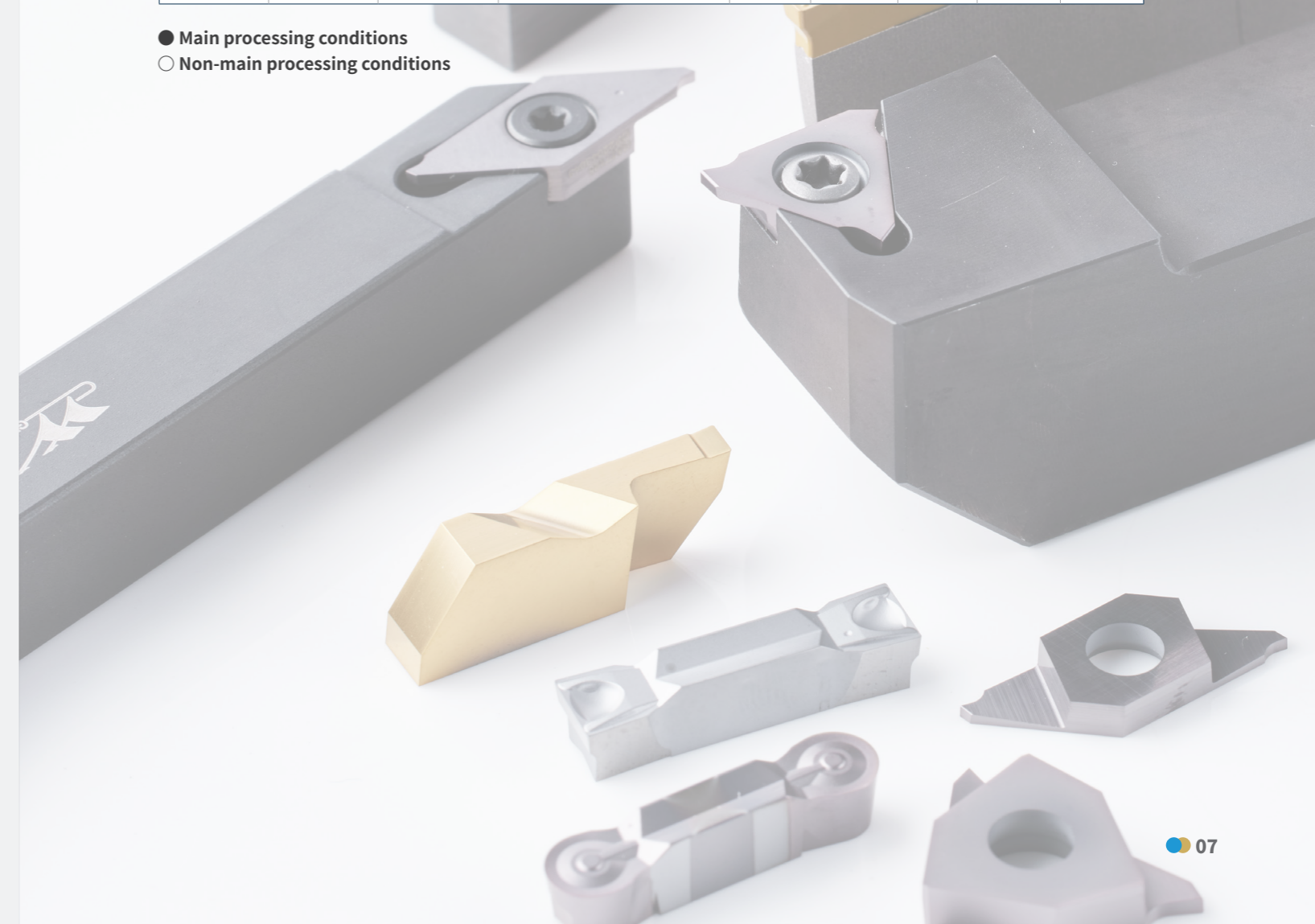
Parting and Grooving Tools



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Type	Series	Pic	Geometry	Type/Edge	Grooving	Parting	Turning	Profiling
Double Head Grooving	GKD		MT, MR	2	○	○	●	●
	GTD		FC, MC, RC, FG, MG, FT, MT, OR, MR	2	●	●	●	●
Finishing Shallow Grooving	GB		GB, GBR	3	●	-	-	●
	G-NOTCH		GNGP, GNR	2	●	-	-	●
			GNGDP, GNRD	1	●	-	-	●
Small Parts	GST		GSTC, GSTS	2	●	●	-	-

- Main processing conditions
- Non-main processing conditions



Milling

Indexable Milling Tools



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Face Milling

Type	Series	Pic	Workpiece Material
Positive	SEE(M)T+MFA145		P M K N S
	ODK(M)T+MFA143		P M K N S
Negative	SNE(M)U+MFB145&245&275&288		P M K N S
	HNE(M)X+MFB160&260		K
	HNG(K)U+MFC115&145&160		P M K S
High Feed	UD(UP)+MKA110		P M K S
	SDMT+MKB113		P M K S
	SOE(M)T+MKT113&213		M S
	LNMX+MKF115		P M K S

Slot Milling and Chamfer Milling

Type	Series	Pic	Workpiece Material
Chamfer	SPMT+MCA130&145&160		P M K S
Medium Slot	CNEU+MSA110-113		P M K
Narrow Slot	SNEX+MSA104-108		P K

Profile Milling

Type	Series	Pic	Workpiece Material
General	RD+MPA100		P M K S H
	RP+MPB100		P M K
	RC+MPC100		P M K S
Ball Nose	QTD+MBA100		P K S H
	QTD-S-T+MBA100&200		P H
	QTD-V-S+MBB100&200		H
Corner Radius	ZCEG+MRA100&200		P H
Tapered Ballnose	SMR-H+MLA200		P M S

Shoulder Milling

Type	Series	Pic	Workpiece Material
Positive	APM(G)T+MEA190		P M K N S
	APK(E)T+MEB190		P M K N S
	ADGT+MET190		P M K S
	APEW+MEJ190		H
	SDKT+MES190		P M K S
Aluminium	XDHT+MEH190		N
Negative	ANKX+MEC190		P M K S
	WNG(M)U+MEE190		P M K S
Vertical	LNE(M)T+MVA190&290		P M K

Milling

Solid Carbide Endmills



Workpiece Material	Processing Form	Product Series	
P K	General Machining	UP210	
	Roughing	UPN210	
		UPR210	
		UPR300	
	High Efficiency Machining	SP210	
		PP300	
	Micro Machining	SPM200	
N	General Machining	UA100	
	Roughing	SA210	
	High Speed Machining	SA300	
		SA300-WF	
		SA300-SF	
	High Efficiency Machining	SA100	
	Special Machining	SA160	
	Graphite	General Machining	SG200/ SG200-M
	Composite Material	General Machining	SD200
	Zirconia	Special Machining	SM200

Milling

Solid Carbide Endmills

Workpiece Material	Processing Form	Product Series
M	General Machining	US200
		US260
S	High Efficiency Machining	SS600
	General Machining	ST210
		SN200
	High Efficiency Machining	ST300
Special Machining	STB200	
H	General Machining	SH160 (45-55HRC)
		SH260 (30-60HRC)
	High Speed Machining	SH360 (45-65HRC)
	High Feed Machining	FH200 (\leq 65HRC)
	Micro Machining	SHM200 (\leq 65HRC)

Holemaking

Roughing Process



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Type	Series	Pic	Workpiece Material
3D-5D Twist Drill	D918S HOT		P K
	D928		K
	D966		N
	D968S		M S
	D998		H
3D-40D Twist Drill	D938 HOT		P K
Centering Drill	D101/D102/D103		P M K N S H
Indexable Insert Drill	GHDS Series		P M K
Spade Drill	GSD Series		P M K
Modular Drill	GUMD HOT Series		P M K
Micro Twist Drill	Customization		P M K N S H
Flat Drill	Customization		N
3 Flutes Drill	Customization		P M K N S

Holemaking

Finishing Process



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Type	Series	Pic	Workpiece Material
Reamer	Customization		P M K N S
Modular Reamer	Customization		P M K N S
Micro Boring	GPT Series		P K
	GMT Series		M
	GHT Series		S H
Boring System	GBR Series		P M K N S

Threading Process



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Type	Series	Pic	Workpiece Material
High-performance	T118 HOT		P M N
	T128 HOT		K
Economical	ET128 HOT		K
	ET138 HOT		P
	ET168 HOT		M
	ET166		N

PCBN/PCD Tools

PCBN Tools



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Item	Applications	Type	Series	Pic
Indexable Tools	Turning	Brazed	YP	
		Brazed Solid	YZ	
		Solid	YS	
	Parting&Grooving	Precision Grooving	GB	
		General Grooving	GTD	
	Milling	Face Milling	SNGN	
		Shoulder Milling	APGW	
Solid PCBN Tools	Milling	Ballnose	Micro Endmill	
	Hole-making	Boring	Micro Boring	

PCBN/PCD Tools

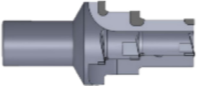






PCD Tools

Item	Applications	Type	Series	Pic
Indexable Tools	Turning	Positive	GB/KB	
		Geometry	DNF/DNM	
	Parting&Grooving	Precision Grooving	*GB	
		General Grooving	*GTD	
	Milling	*Face Milling	Customization	
		Shoulder Milling	APGW/APGT	
Solid PCD Tools	Milling	Endmill	DNM100	
		Face Milling	Customization	
		Forming	Customization	
		Wave Flute	DNR100	
		Corn Milling	Customization	

*Customised products

PCBN/PCD Tools

PCD Tools

Item	Applications	Type	Series	Pic
Solid PCD Tools	Hole-Making	Reamer 	Normal	
			Guide Bar	
		Countersink Drill	DND100	
		*Twists Drill	Customization	
		*Straight Drill	Customization	
		*Step Drill	Customization	
		Borning	Customization	

*Customised products

Insert Grades

Recommendation for Turning Grade and Geometry Choice

Material	Coated	Grade	Vc (m/min)	01	10	20	30	40	50	Turning Insert (Negative)	Turning Insert (Positive)
P	CVD	GPT6110	140-400								
		GPT6120	80-320								
		GPT6130	70-320								
		GP1105	80-320								
		GP1115	120-360								
		GP1120	110-360								
		GP1225	70-320								
		GP1130	90-300								
	Cermet Coated Cermet	GP91TM	150-350								
		GP31TM	180-380								
M	CVD	GM1115	180-300								
		GM1230	160-280								
		GM3215	100-250								
	PVD	GM3220	60-180								
		GM3225	60-180								
Cermet Coated Cermet	GP91TM	150-350									
	GP31TM	180-380									
K	CVD	GK1115	180-500								
		GK1120	160-360								
		GK1125	160-500								
	Cermet Coated Cermet	GP91TM	150-350								
		GP31TM	180-380								
	CBN	BKN115P	400-1500								
		BKN225S	400-1200								
		BKN225Z	400-1200								
Coated CBN	BKC120P	150-500									

Insert Grades

Recommendation for Turning Grade and Geometry Choice

Material	Coated	Grade	Vc (m/min)	01	10	20	30	40	50	Turning Insert (Negative)	Turning Insert (Positive)
N	PVD	GNT7120	250-1500		[Bar]						
		GN9115	250-970		[Bar]						
	Carbide	GN9120	250-960		[Bar]						
		GN9130	250-950		[Bar]						
	PVD	DNN125P	10-3000		[Bar]						
S	PVD	GS3115	30-80		[Bar]						
		GS3125	30-80		[Bar]						
		GST7120	30-80		[Bar]						
		GST7115	15-70		[Bar]						
	GST7130	20-40		[Bar]							
CBN	BSN115P	150-260		[Bar]							
H	Coated CBN	BHN225S	120-190		[Bar]						
		BHC115P	120-220		[Bar]						
		BHC125P	100-180		[Bar]						
		BHC135P	80-150		[Bar]						
		BHC210P	140-260		[Bar]						
		BHC225P	120-220		[Bar]						
		BHC215Z	120-230		[Bar]						
BHC225Z	120-200		[Bar]								

Recommendation for Small Part Turning Grade and Geometry Choice

Material	Coated	Grade	Vc (m/min)	01	10	20	30	40	50	Turning Insert (3D Geometry)	Turning Insert (General Geometry)
P	PVD	GAT7115	60-180		[Bar]						
		GAT7120	40-140		[Bar]						
		GAT7120A	50-160		[Bar]						
		GAT7125	40-150		[Bar]						
M	PVD	GAT7115	60-150		[Bar]						
		GAT7120	40-120		[Bar]						
		GAT7125	40-130		[Bar]						

Insert Grades

Recommendation for Milling Grade

Material	Coated	Grade	Vc (m/min)	01	10	20	30	40	50
P	PVD	GA4225	100-260		[Bar]				
		GA4325	80-260		[Bar]				
		GA4230	70-280		[Bar]				
		GP4225	110-260		[Bar]				
		GPM7120	120-260		[Bar]				
	CVD	GP2115	110-320		[Bar]				
Cermet	GP01TM	100-350		[Bar]					
	GP91TM	100-350		[Bar]					
M	CVD	GM2140	80-250		[Bar]				
	PVD	GM4135	80-220		[Bar]				
		GM4240	120-280		[Bar]				
K	PVD	GK4125	140-250		[Bar]				
	CVD	GK2115	140-350		[Bar]				
N	PVD	GNT7120	300-900		[Bar]				
	/	GN9125	200-600		[Bar]				
S	PVD	GS4130	30-80		[Bar]				
		GSM7130	20-80		[Bar]				
H	PVD	GHM7120	100-250		[Bar]				
		GH4115	100-200		[Bar]				

Recommendation for Hole-Making Grade

Material	Coated	Grade	Vc (m/min)	01	10	20	30	40	50
P	PVD	GA4230	80-280		[Bar]				
		GPD7115	60-160		[Bar]				
M	PVD	GM3220	60-200		[Bar]				
		GM3225	60-200		[Bar]				
S	PVD	GS4130	30-80		[Bar]				

Tooling Systems



Hydraulic Chuck	Shrink Chuck	PSC Products	General Holder				Boring Tools	
			ER Series	Side-Lock	Strength	Face Milling	Roughing Boring	Finishing Boring

Intelligent Tool Cabinet



Spring Main Cabinet GESAC-TH-80Z	Spring Auxiliary Cabinet GESAC-TH-80F	Separable Drawer GESAC-CT	Auxiliary Drawer GESAC-CT-120F	Recycling Cabinet GESAC-HS-2

Forming & Expanding Tools

Forming Tools

*Broach Tools		*Forming Milling Tools	*Forming Gear Tools
Round Broach	Plane Broach	Christmas Tree Endmill	Disc Gear Milling Tools

*Non-Standard Product, Customized On Demand

Expanding Tools

*Gear Rolling Tools	*Worm Gear and Rod Tools

*Non-Standard Product, Customized On Demand



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