

Hubei Risun Special Steel CO.,LTD.

RISUN

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**HUBEI RISUN
SPECIAL STEEL CO.,LTD.**

湖北瑞昱特钢有限公司

HUBEI RISUN SPECIAL STEEL CO.,LTD.

湖北瑞昱特钢有限公司

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| HUBEI · CHINA |

ISO 9001 : 2000 Certificate of Quality Management System
通过ISO 9001 : 2000质量体系认证

About Us

企业简介

Hubei Risun Special Steel CO.,LTD is an industrial company combines with research, manufacturing, marketing, importing and exporting. It located in Huangshi Hubei China which is famous as hometown of special steel.

Our company consists of two subsidiaries in forging and rolling with total assets of over 120 million yuan. With a complete production process of melting, forging, hot rolling and heat treatment, we manufacture cold work tool steel、hot work tool steel、plastic mould steel and various alloy construction steel、high alloy tool steel. We possessed of 5 tons arc furnace, 3 tons MF furnace, 1-5 tons electro slag furnace for melting; type of 650 rolling mill imported from Germany and 560KG-5 tons forging hammers and drop hammers for hot rolling and forging; 8 pcs 30 tons electricity annealing furnaces for subsequent heat treatment and electric grinding wheel peeling machines, electric band saws, milling machines and lathes for processing. Our quality control includes chemical analysis, spectral analysis and high/low crystalline phase detection executed by testing equipment. We had over 100 different products and annual production capacity reaches 30,000 tons and we are able to produce forged round bars ϕ 50-450 mm, forged plates 20-300 mm \times 50-710 mm, rolled round bars ϕ 10-80 mm, rolled plates 10-65 mm \times 155-610 mm as well as formed forgings of shaft and disc types.

It has a staff of 480 including more than 70 professionals in the fields of melting, forging, quality control, heat treatment, machining, finance and business management, 60% of them are senior engineers. Our staff members are from Daye Special Steel CO.,LTD which is China's special steel base with centenary histories. They work as technicians, operators and inspectors in different processes to guarantee superior quality of our products. We also work closely with universities in Wuhan on technical cooperation in areas of production, learning and research & development to enhance new product development capability and market competitiveness.

The company currently serves over 50 well-known customers in 10 countries all around the world. The average exporting volume of special steel is up to 15,000 Ton.

We are adhering to the philosophy of "integrity management, continuous improvement, good service, quality first, win-win solutions and mutual development".

Welcome all of you to visit and negotiate for business.

Innovative Efficient / Harmonious Faithful
创 新 高 效 ， 亲 和 诚 信



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HUBEI RISUN
SPECIAL STEEL CO.,LTD

湖北瑞昱特钢有限公司 (Hubei Risun Special Steel CO.,LTD.) 是一家集特钢产品的科研、生产、销售和进出口贸易为一体，具有独立法人资格的实业性公司。公司的注册地在中国的模具钢之乡--湖北省黄石市，办公地址在黄石市口岸大楼17层。公司的生产厂由锻材生产厂和轧材生产厂组成，具有集冶炼、锻造、热轧和热处理为一体的完整的生产工艺流程，生产冷作模具钢，热作模具钢，塑料模具钢三大系列以及多种合金结构钢，高合金工具钢等百余种产品。具有模具钢年产量达30000吨。冶炼设备有5吨电弧炉，3吨中频炉，1-5吨电渣炉；锻造和热轧设备有德国进口的650轧机、560KG-5吨锻锤以及吊锤；后续热处理设备有30吨电退货炉8台；机加工设备有电动砂轮剥皮机，电动带锯，龙门铣床，车床等；产品质量检测包括化学分析和光谱分析以及高、低倍晶相检测；总体资产超过1.2亿元。产品规格：锻圆： ϕ 50-450mm；锻板：20-300mm \times 50-710mm；轧圆： ϕ 10-80mm；轧板：10-65mm \times 155-610mm；轴类与盘类异型锻件。公司总体员工人数480人，包括钢的冶炼、锻造、内部和表面质量控制、热处理、机械加工、财务和企业管理的专业人员70余人，高级工程师占60%。由有着百年历史中国特钢基地--原大冶钢厂的技术人员，担任特钢产品的冶炼、锻造、热处理、精整和检验等岗位炉长、作业长和质检员，以保证我们的特钢产品质量精良。开展与武汉地区高等院校建立产、学、研技术合作，提高公司新产品研发能力和市场竞争力实体。公司目前与世界各地10余个地区的50多名客户建立了良好的合作关系，年产量达到15,000吨。

公司坚持诚信经营，与时俱进，为用户服务，质量第一，互惠共赢，携手发展的经营理念。欢迎各界人士光临洽谈业务！

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Production Survey / 生产概况



Crystalline phase analysis 金相检验



Chemical analysis 化学分析



Ultrasonic test 探伤



Chemical analysis 化学分析



Spectrum analysis 光谱分析



Hardness inspection 硬度检测

Product Testing / 产品检测

Our company is equipped with experienced and professional inspection team which are responsible for chemical analysis, dimension, intension, hardness and high/low crystalline phase analysis as well as ultrasonic test for all Risun products in technical inspection center.

公司设有专业的技术检测中心，可对产品的化学成分、几何尺寸、硬度、强度进行检验及金相高、低倍的检测和分析，同时对每支钢材进行超声波探伤，有一只经验丰富的产品检验队伍。



5-ton electric arc furnace
五吨电弧炉



machining 机加工



Electroslag furnace 电渣炉



control system of electroslag furnace
电渣炉控制系统



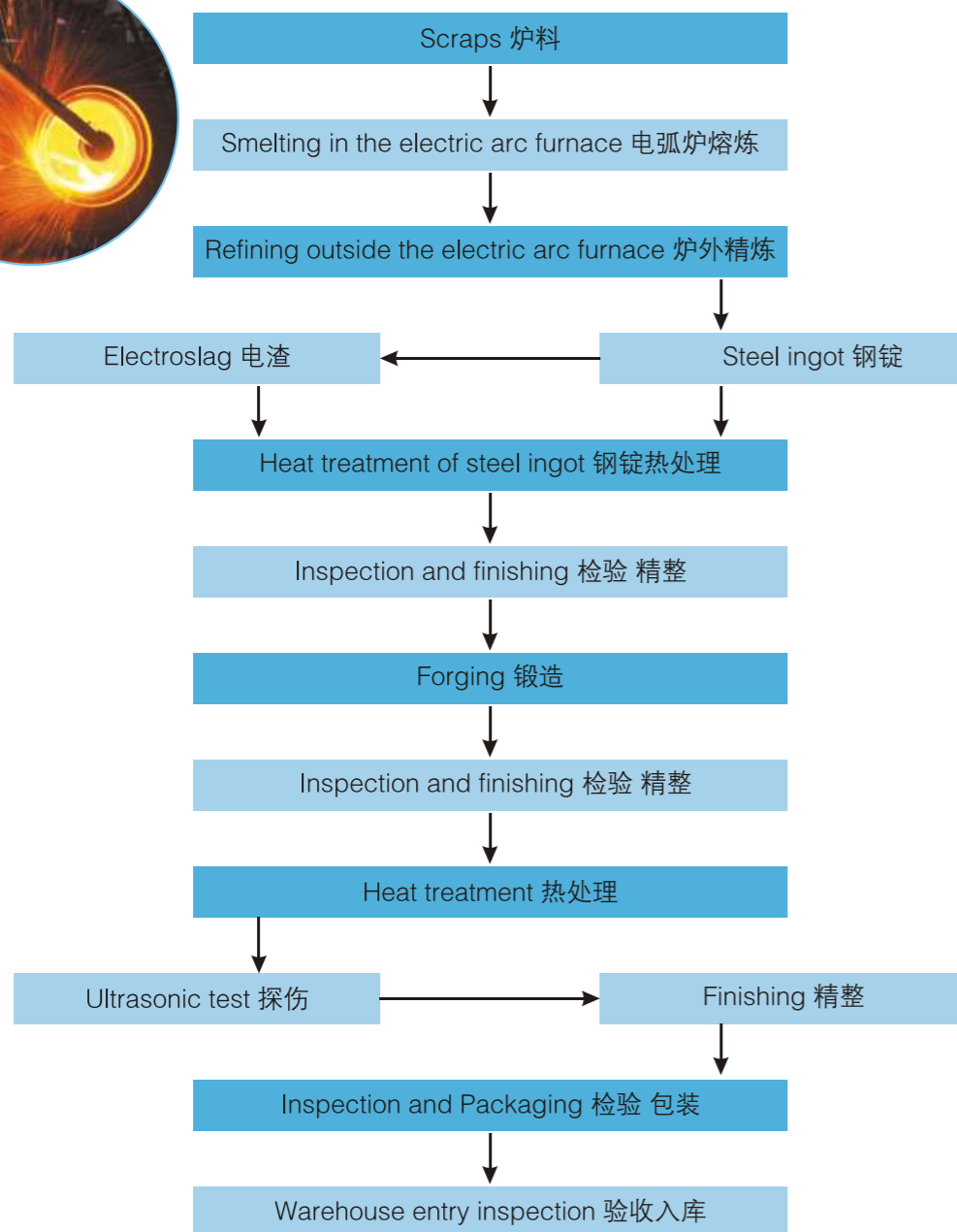
Rolling mill 轧机



3-ton electro-hydraulic hammer
三吨电液锤



Production process flow of tool steel 模具钢生产工艺流程



Product Introduction / 产品介绍



H13/1.2344/SKD61 ESR



D3/1.2080/SKD1



O1/1.2510/SKS3



D2/1.2379/SKD11



L6/1.2714/SKT4



H13/1.2344/SKD61 ESR



P20+Ni/718/1.2738



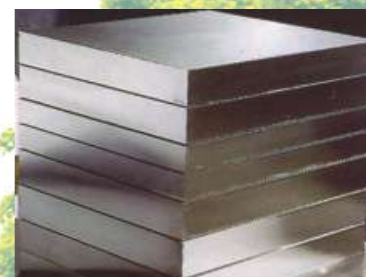
H13/1.2344/SKD61



1.2601/SKD11



1.2601/SKD11



D3/1.2080/SKD1



H10/1.2365/SKD7



Chinese and foreign steel grade cross-references

Steel Grade	No.	China GB	United States AISI	Germany DIN	Japan JIS	Others	
Tool steel	Cold work tool steel	01	Cr12	D3	1.2080	SKD1	
		02	Cr12MoV		1.2601	SKD11	
		03	Cr8Mo2SiV			SKD11 modified	DC53 (DAIDO)
		04	Cr12Mo1V1	D2	1.2379	SKD11	
		05	Cr12W	D6	1.2436		
		06	9CrWMn	O1	1.2510	SKS3	
		07	9Mn2V	O2	1.2842		
		08	Cr5Mo1V	A2	1.2363	SKD12	
		09	5Cr3Mn1SiMo1V	S7			
	Hot work tool steel	10	4Cr3Mo3SiV	H10	1.2365	SKD7	
		11	4Cr5MoSiV	H11	1.2343	SKD62	
		12	4Cr5MoSiV1	H13	1.2344	SKD61	
		13	3Cr2W8V	H21	1.2581	SKD5	
		14	5CrMnMo	6G	1.2311	SKT3	
		15	5CrNiMo	L6	1.2713	SKT4	
	Plastic mould steel	16	3Cr2Mo	P20	1.2311		
		17	3Cr2NiMnMO	P20+Ni	1.2738		718 (ASSAB)
		18	4CrNi4Mo		1.2767		
		19	3Cr17NiMo		1.2316		
		20	10Ni3MnCuAl				NAK80
		21	15Ni3MnMoAlCuS				NAK55
		22	4Cr13	420	1.2083	SUS420J2	
High speed tool steel	23	W6Mo5Cr4V2	M2	1.3338	SKH51		
	24	W18Cr4V	T1	1.3355	SKH2		
Carbon tool steel	25	T8	W1A-8	1.1625	SK5/SK6		
	26	T10	W1	1.1545	SKS93		
Alloy tool steel	27	40Cr	5140	41Cr4	SCr440	SCM440	
	28	20CrMo	4120	25CrMo4	SCM420	SCM420	
	29	35CrMo	4135	34CrMo4	SCM435	SCM435	
	30	42CrMo	4140	42CrMo4	SCM440	SNCM439	
	31	20CrNiMo	8620	20NiCrMo2-2	SNCM220	SNCM220	
	32	40CrNiMo	4340	34CrNiMo6	SNCM439	SCr440	
	33	38CrMoAl	6470E	34CrAlMo5	SACM435	SACM435	
Carbon construction steel	34	10	1010	C10	S10C		
	35	20	1020	C22	S20C		
	36	45	1045	C45	S45C		
	37	50	1050	C50	S50C		
Bearing steel	38	GCr15	52100	100Cr6	SUJ2		
	39	9Cr18Mo		100Cr7	SUJ4		

Customized or tailor-made orders will be welcomed

热作模具钢

4Cr5MoSiV1/H13/1.2344/SKD61

相似牌号	美国 H13 (等同)		德国 X40CrMoV51 1.2344		日本 SKD61		ASSAB (瑞典) 8407		Böhler (奥) W302	
	标准	C	Mn	Si	Cr	Mo	V	P	S	Cu
化学成分%	GB/T1299-2000	0.32/0.45	0.20/0.50	0.80/1.20	4.75/5.50	1.10/1.75	0.80/1.20	≤0.030	≤0.030	≤0.030
特点	空冷硬化钢, 600℃作业, 强度高, 韧性优, 抗热裂性好。电渣重熔钢, 组织致密, 电炉精炼钢质纯净, 具较好的等向性能。									
用途	铝镁合金挤压模, 压铸模, 特别是适合大型或形状复杂之模具。可做铜合金挤压模, 压铸模。可作钢热压力机模。									
热处理	淬火: 1020-1050℃, 油冷									
	淬硬	180-300℃		450-500℃		550-570℃				
	53-55	51-52		53-54		50-52				
尺寸规格 (mm)	为求模具工作尺寸稳定, 回火温度应比工作温度高约25℃。为去除机加工应力, 可加热至~650℃均热后, 炉冷至500℃空冷退火, 800-850℃透热后, 缓冷。									
出厂状态	板材: 20-400x200-1000 棒材: Φ50-Φ600 退火HBW≤235									

Hot Work Die Steel

4Cr5MoSiV1/H13/1.2344/SKD61

Similar to Other foreign Grade	ASTM H13 (equal)		DIN X40CrMoV51 1.2344		JIS SKD61		ASSAB 8407		Böhler W302	
	Standard	C	Mn	Si	Cr	Mo	V	P	S	Cu
Composition%	GB/T1299-2000	0.32/0.45	0.20/0.50	0.80/1.20	4.75/5.50	1.10/1.75	0.80/1.20	≤0.030	≤0.030	≤0.030
Description	Air cooling hardened hot work tool steel at the temperature of 600℃, high intensity and toughness, good heat resistance. Compact structure of electroslag remelting steel; High quality of electric refining steel with better isotropy.									
Application	Application: For making extrusion and casting die used to producing aluminium magnesium alloy, especially for large section or complex shape; Also used to producing copper alloy and forging press mold.									
Heat treatment	Quenching: 1020-1050℃ oil cooling									
	T℃	180-300℃		450-500℃		550-570℃				
	53-55	51-52		53-54		50-52				
Size and shape (millimeter)	Tempering temperature should be 25℃ higher than operating temperature in order to guarantee the stabilization of mould dimension; Heating to average of 650℃, air cooling after furnace cooling up to 500℃; Annealing after forging at the temperature of 800-850℃, retarded cooling.									
Delivery condition	Flats: 20-400x200-1000 Bars: Φ50-Φ600 Annealing, hardness is below 235HBW									

热作模具钢

H10/4Cr3Mo3SiV/1.2365

相似牌号	美国		中国		日本		德国		俄罗斯		
	H10		4Cr3Mo3SiV		SKD7		1.2365		3X3M3Φ		
化学成分%	标准	C	Mn	Si	Cr	Mo	Ni	P	S	V	Cu
		GB/T1299-2000	0.35/0.45	0.25/0.70	0.80/1.20	3.00/3.75	2.00/3.00	≤0.03	≤0.03	≤0.03	0.25/0.75
特点	材质均匀纯度高，结晶细，球化组织均匀，气体含量低，高Mo成分产生二次析出碳化物，具有提高材料高温强度和回火抗性的效果；热稳定性和抗热疲劳性好。										
用途	用于制作高温时仍需维持高硬度的热加工工具，如挤型模、压杆、压饼、心轴、锻造模、压铸模。										
热处理	1020℃油淬500-650℃回火水或油冷										
尺寸规格 (mm)	板材：20-400x200-1000 棒材：Φ50-Φ600										
出厂状态	回火 HBW≤229										

冷作模具钢

Cr8Mo2SiV/DC53

相似牌号	美国		中国		日本		德国		奥
	H10		Cr8Mo2SiV		Dc53				K430
化学成分%	标准	C	Mn	Si	Cr	Mo	V	P	S
		GB/T1299-2000	0.90/1.05	0.20/0.50	0.80/1.10	7.5/8.5	1.8/2.1	0.15/0.35	≤0.030
特点	真空精炼工艺生产，经锻造材，共晶碳化物均匀，韧性高，不易开裂。								
用途	用于高韧性，高耐磨性深冲模及花模。								
热处理	1030℃油淬，200℃回火 硬度可达HRC 60-63								
尺寸规格 (mm)	板材：20-400x200-1000 棒材：Φ50-Φ600								
出厂状态	退火状态 HBW≤255								

Hot Work Die Steel

H10/4Cr3Mo3SiV/1.2365

Similar to Other foreign Grade	ASTM		GB		JIS		DIN		ROCT		
	H10		4Cr3Mo3SiV		SKD7		1.2365		3X3M3Φ		
Composition%	Standard	C	Mn	Si	Cr	Mo	Ni	P	S	V	Cu
		GB/T1299-2000	0.35/0.45	0.25/0.70	0.80/1.20	3.00/3.75	2.00/3.00	≤0.03	≤0.03	≤0.03	0.25/0.75
Description	High purity and homogeneous material, fine crystallization, evenly spheroidized structure, low gas content, the secondary carbides with high composition of Molybdenum have the effects of increasing high-temperature strength and tempering resistance in material ; good heat resistance and hot fatigue resistance.										
Application	For making hot working tooling which maintains good hardness at high temperature, such as extrusion die, compression bar, dummy block, forging die, casting die.										
Heat treatment	Oil quenching at 1020℃, tempering at 500-650℃, water or oil cooling										
Size and shape (millimeter)	Flats 20-400x200-1000 Bars Φ50-Φ600										
Delivery condition	Tempering is below 229HBW										

Cold Work Die Steel

Cr8Mo2SiV/DC53

Similar to Other foreign Grade	ASTM		GB		JIS		DIN		Böhler
	H10		Cr8Mo2SiV		Dc53				K430
Composition%	Standard	C	Mn	Si	Cr	Mo	V	P	S
		GB/T1299-2000	0.90/1.05	0.20/0.50	0.80/1.10	7.5/8.5	1.8/2.1	0.15/0.35	≤0.030
Description	Vacuum refining process production, homogeneous crystallization carbides, better ductility and its molds rarely have cracks.								
Application	Used for making blanking dies for wire cutting as well as punching dies with high toughness and abrasion resistance.								
Heat treatment	1030℃ hatreatment with oil. 200℃ tempering with hardness. Of HRC 60-63								
Size and shape (millimeter)	Flats: 20-400x200-1000 Bars: Φ50-Φ600								
Delivery condition	Annealing, hardness is below 255HBW								

冷作模具钢

Cr12MoV/1.2601/SKD11

相似牌号	美国		中国		日本		德国		奥
			Cr12MoV		SKD11				
化学成分%	标准	C	Si	Mn	P、S	V	Cr	Mo	Co
		GB/T1299-2000	1.45/1.70	≤0.40	≤0.40	≤0.030	0.15/0.30	11.00/12.50	0.15/0.30
特点	高碳高铬莱氏体钢，具有较好的淬透性和良好的耐磨性，淬火变形小。								
用途	用于制造要求高耐磨性的大型复杂的冷作磨具，如剪切刀、切边模、纹滚模和要求高耐磨的冷冲模及冲头等。								
热处理	淬火温度：950℃-1040℃ 回火温度：180℃								
尺寸规格 (mm)	板材：20-400x200-1000 棒材：Φ50-Φ600								
出厂状态	HBW 255-207								

冷作模具钢

Cr12Mo1V1/D2/1.2379

相似牌号	美国 D2 (等同)		德国 X155CrVMo12-1 (1.2379)		日本 SKD11		ASSAB (瑞典) XW-41		Böhler (奥) KW110	
	标准	C	Mn	Si	Cr	Mo	V	Co	P	S
化学成分%	GB/T1299-2000	1.40/1.60	≤0.60	≤0.60	11.00/13.00	0.70/1.20	0.5/1.10	≤1.00	≤0.030	≤0.030
特点	高淬透性，高硬度、高耐磨、淬火变形小。具有Cr12高硬度的特点，且韧性好，适用于复杂可能变形的工具模。									
用途	高耐磨性长寿的各类冷冲压模具及冷剪切刀，搓丝板等。									
热处理	淬火：推荐980-1040℃油、风（宜二次预热~500℃-850℃）HRC 62-64 回火：消除应力，稳定组织，180-200℃≥2小时 HRC 62-63 回火温度和HRC硬度变化（参考）									
	180-200℃		250℃		300℃		450℃			
	62-63		62		61		59			
	退火：780-800℃缓冷									
尺寸规格 (mm)	板材：20-400x200-1000 棒材：Φ50-Φ600									
出厂状态	退火 HBW≤255									

Cold Work Die Steel

Cr12MoV/1.2601/SKD11

Similar to Other foreign Grade	ASTM		GB		JIS		DIN		Böhler
			Cr12MoV		SKD11				
Composition%	Standard	C	Si	Mn	P、S	V	Cr	Mo	Co
		GB/T1299-2000	1.45/1.70	≤0.40	≤0.40	≤0.030	0.15/0.30	11.00/12.50	0.15/0.30
Description	A kind of Ledeburitic steel of high carbon、high chromium with good hardenability, abrasion resistance and little quenching distortion.								
Application	Used for making large and complex cold wok tool steel with high abrasion resistance, such as: cold-cutting scissors, thread rolling die and etc.								
Heat treatment	Quenching temperature 950-1040℃ Tempering temperature 180℃								
Size and shape (millimeter)	Flats: 20-400x200-1000 Bars: Φ50-Φ600								
Delivery condition	HBW 255-207								

Cold Work Die Steel

Cr12Mo1V1/D2/1.2379

Similar to Other foreign Grade	ASTM D2		DIN X155CrVMo12-1 (1.2379)		JIS SKD11		ASSAB XW-41		Böhler KW110	
	Standard	C	Mn	Si	Cr	Mo	V	Co	P	S
Composition%	GB/T1299-2000	1.40/1.60	≤0.60	≤0.60	11.00/13.00	0.70/1.20	0.5/1.10	≤1.00	≤0.030	≤0.030
Description	High hardenability, hardness, abrasion resistance and little quenching distortion; Similar to Cr12 with good toughness, suitable for complex and easy distortion mould.									
Application	Used for making cold wok tool steel, cold-cutting scissors, thread rolling die and etc. of high abrasion resistance and long service life.									
Heat treatment	Quenching: Recommended 980-1040℃ oil or air, it's good for secondary preheating 500-850℃, HRC 62-64; Tempering: Eliminate stress, stabilize structure, 180-200℃≥2 hours, HRC 62-63									
	180-200℃		250℃		300℃		450℃			
	62-63		62		61		59			
	Annealing: 780-800℃ slow cooling									
Size and shape (millimeter)	Flats: 20-400x200-1000 Bars: Φ50-Φ600									
Delivery condition	Annealing, hardness is below 255HBW									

预硬化塑料模具钢

3Cr2Mo/P20/1.2311

相似牌号	美国 P20 (等同)		德国 (1.2311)		ASSAB (瑞典) 618		Böhler (奥) M202		
化学成分%	标准	C	Mn	Si	Cr	Mo	Ni	P	S
	GB/T1299-2000	0.28/0.40	0.60/1.00	0.20/0.80	1.40/2.00	0.30/0.55	≤0.25	≤0.030	≤0.030
特点	已预硬化至HBW284-332 (HRC30-36) 可免除热处理, 永不变形。电炉精炼或电渣重熔钢, 适合电蚀 (电火花) 加工, 易镜面抛光。								
用途	热塑性塑料的注塑模, 吹塑模具和挤压模具。								
尺寸规格 (mm)	板材: 20-400x200-1000 棒材: Φ50-Φ600								
出厂状态	板材预硬化至HRC 30-36 棒材预硬化或退火 HBW≤235								

预硬化塑料磨具钢

3Cr2NiMnMo/P20+Ni/718/1.2738

相似牌号	中国 3Cr2Mo+Ni		美国 P20+Ni		德国 (1.2738)		ASSAB (瑞典) 718		Böhler (奥) M238
化学成分%	标准	C	Mn	Si	Cr	Mo	Ni	P	S
	GB/T1299-2000	0.32/0.40	1.10/1.50	0.20/0.40	1.70/2.00	0.25/0.40	0.85/1.15	≤0.030	≤0.030
特点	已预硬化HBW284-332 (HRC30-36) 不需要再淬硬, 永不变形。可再硬化至HRC40。电炉精炼或电渣重熔钢, 适合电蚀 (电火花) 加工, 易镜面抛光。淬透性高, 综合力学性能好。								
用途	用于高寿命或大型塑料模具; 有镜面抛光要求的大型塑料模具。								
热处理	淬火 回火温度与硬度HRC的关系 (参考)								
	830-860℃	200℃	300℃	400℃	500℃	600℃	650℃		
	51HRC	~50HRC	~48HRC	~46HRC	~42HRC	~36HRC	~33HRC		
消除切削加工应力, 可在530℃保持2-2.5小时空冷									
尺寸规格 (mm)	板材: 20-400x200-1000 棒材: Φ50-Φ600								
出厂状态	预硬化 (板材、棒材) 30-36HRC								

Pre-Hardened Plastic Mould Steel

3Cr2Mo/P20/1.2311

Similar to Other foreign Grade	ASTM P20 (equal)		DIN (1.2311)		ASSAB (瑞典) 618		Böhler (奥) M202		
Composition%	Standard	C	Mn	Si	Cr	Mo	Ni	P	S
	GB/T1299-2000	0.28/0.40	0.60/1.00	0.20/0.80	1.40/2.00	0.30/0.55	≤0.25	≤0.030	≤0.030
Description	It could use directly without heat treatment on condition of prehardening to HBW284-332 (HRC30-36) and little deformation. It is good for electrosparking and polishing with electrosag remelting or electric refining steel.								
Application	Used for making thermoplastic injection mold, blow mold tools and extrusion die.								
Size and shape (millimeter)	Flats: 20-400x200-1000 Bars: Φ50-Φ600								
Delivery condition	Preheating to HRC30-36 for flat; Preheating or annealing HBW≤235 for bar								

Pre-Hardened Plastic Mould Steel

3Cr2NiMnMo/P20+Ni/718/1.2738

Similar to Other foreign Grade	GB 3Cr2Mo+Ni		ASTM P20+Ni		DIN (1.2738)		ASSAB 718		Böhler M238
Composition%	Standard	C	Mn	Si	Cr	Mo	Ni	P	S
	GB/T1299-2000	0.32/0.40	1.10/1.50	0.20/0.40	1.70/2.00	0.25/0.40	0.85/1.15	≤0.030	≤0.030
Description	It could use directly without quenching on condition of prehardening to HBW284-332 (HRC30-36) and little deformation. Then prearden once again to HRC40. It is good for electrosparking and polishing with electrosag remelting or electric refining steel. High hardenability and excellent comprehensive mechanical properties.								
Application	Suitable for making large-sized plastic moulds with long life span and polishing.								
Heat treatment	Quenching Eliminate stress, air cooling 2-2.5 hours at the temperature of 530℃.								
	830-860℃	200℃	300℃	400℃	500℃	600℃	650℃		
	51HRC	~50HRC	~48HRC	~46HRC	~42HRC	~36HRC	~33HRC		
Tempering for relieving stress of machined 530℃ hold 2-2.5 hours cooling in air									
Size and shape (millimeter)	Flats: 20-400x200-1000 Bars: Φ50-Φ600								
Delivery condition	Prehardened for flat and bar, hardness 30-36 HRC								

耐腐蚀超镜面塑料模具钢

S136/420/1.2083/4Cr13

相似牌号	美国 420	中国 4Cr13	德国 X42Cr13	ASSAB (瑞典) S136	Böhler (奥) M310	日本 SUS 420J2	DAIDO (大同) S-STAR		
化学成分%	标准	C	Si	Mn	Cr	Ni	V	P	S
	FTBI-2000	0.36/0.45	≤0.60	≤0.80	12.00/14.00	≤0.60	—	≤0.030	≤0.030
特点	铬13型不锈钢耐腐蚀钢。 淬回火后硬度高，有超镜面加工性，HRC > 50。 可预硬至HRC30-36镜面加工性好，并免除热处理，永不变形。								
用途	有腐蚀气体的含氟塑料或添加阻燃剂（含氟）塑料模具。								
热处理	退火：880℃缓冷 淬火：1020-1100℃油冷经500℃-800℃二次预热 回火：200-300℃空冷HRC52-50								
尺寸规格 (mm)	板材：20-400 × 200-1000 棒材：Φ50-Φ600								
出厂状态	退火 HBW ≤ 235 预硬 HRC 30-36								

高强度合金结构钢

34CrNiMoA/1.6582

相似牌号	美国		中国		日本		德国		奥
			34CrNiMoA				1.6582		
化学成分%	标准	C	Si	Mn	P	S	Cr	Ni	Mo
	FX24-87	0.30/0.38	0.15/0.40	0.40/0.70	≤0.035	≤0.035	1.40/1.70	1.40/1.70	0.15/0.30
特点	变形小，硬度高，耐磨性较高，良好的抗接触载荷能力；良好的弯曲疲劳强度，满意的抗粘合性。								
用途	用于耐磨，有较高接触应力的零件，可进行整体和局部表面感应淬火。								
热处理	淬火温度：830℃-860℃油冷 回火温度：540℃-680℃空冷								
尺寸规格 (mm)	板材：20-400 × 200-1000 棒材：Φ50-Φ600								
出厂状态	退火 HBW ≤ 217								

Corrosion Resistant and Super-mirror Plastic Mould Steel

S136/420/1.2083/4Cr13

Similar to Other foreign Grade	ASTM 420	GB 4Cr13	DIN X42Cr13 (1.2083)	ASSAB S136	Böhler M310	JIS SUS 420J2	DAIDO S-STAR		
Composition%	Standard	C	Si	Mn	Cr	Ni	V	P	S
	FTBI-2000	0.36/0.45	≤0.60	≤0.80	12.00/14.00	≤0.60	—	≤0.030	≤0.030
Description	Stainless and corrosion resistant steel same as Cr13. High hardness, good polishing after quenching, HRC ≥ 50. It could use directly without heat treatment on condition of prehardening to HRC30-36 and little deformation.								
Application	Used for making chlorine plastic with etchant gas or oxidant.								
Heat treatment	Annealing: 880℃ retarded cooling quenching: 1020-1100℃ oil cooling and then the secondary preheating at the temperature of 500-800℃ tempering: 200-300℃ air cooling, HRC 52-50								
Size and shape (millimeter)	Flats: 20-400 × 200-1000 Bars: Φ50-Φ600								
Delivery condition	Annealed hardness HBW ≤ 235 Prehardened HRC 30-36								

Alloy Structural steel of high strength

34CrNiMoA/1.6582

Similar to Other foreign Grade	ASTM		GB		JIS		DIN		Böhler
			34CrNiMoA				1.6582		
Composition%	Standard	C	Si	Mn	P	S	Cr	Ni	Mo
	FX24-87	0.30/0.38	0.15/0.40	0.40/0.70	≤0.035	≤0.035	1.40/1.70	1.40/1.70	0.15/0.30
Description	Little deformation, high hardness and abrasion resistant and good resistance to contact load capacity; better bending fatigue intensity and anti stickiness.								
Application	Used for making high abrasion resistant and contact stress components with induction quenching in whole and partial surfaces.								
Heat treatment	Quenching temperature: 830-860℃ oil cooling Tempering temperature: 540-680℃ air cooling								
Size and shape (millimeter)	Flats: 20-400 × 200-1000 Bars: Φ50-Φ600								
Delivery condition	Annealed HBW ≤ 217								

轧辊用钢

9Cr2Mo

相似牌号	美国		中国		日本		德国	奥
			9Cr2Mo					
化学成分%	标准	C	Mn	Si	Cr	Mo	P	S
		GB/T15547	0.85/0.95	0.20/0.35	0.25/0.45	1.70/2.10	0.2/0.4	≤0.025
特点	高碳钢，具有良好的球化组织，具有较高的硬度和耐磨性，抗淬裂能力及回火稳定性高。							
尺寸规格 (mm)	板材：20-400×200-1000 棒材：Φ50-Φ600							

冷作模具钢

Cr12/D3/1.2080/SKD1

相似牌号	美国D3		中国Cr12		日本SKD1		德国1.2080		奥	
	标准	C	Si	Mn	P	S	Cr	Mo	V	W
化学成分%	GB/T1299-2000	2.00-2.30	≤0.40	≤0.40	0.030	0.030	11.50-13.00			
特点	是应用广泛的冷作模具钢，具有高强度、较好的淬透性和良好的耐磨性，但冲击韧性差。									
用途	主要用作承受冲击负荷较小，要求高耐磨的冷冲模及冲头、冷切剪刀、钻套、量规、拉丝模、压印模、搓丝板、拉延模和螺纹滚模等。									
热处理	1) 淬火，950~1000℃油冷；2) 淬火 980℃，油冷，180℃回火2h									
尺寸规格 (mm)	板材：20-400×200-1000 棒材：Φ50-Φ600									
出厂状态	以退火状态交货									

Roll steel

9Cr2Mo

Similar to Other foreign Grade	ASTM		GB		JIS		DIN	Böhler
			9Cr2Mo					
Composition%	Standard	C	Mn	Si	Cr	Mo	P	S
		GB/T15547	0.85/0.95	0.20/0.35	0.25/0.45	1.70/2.10	0.2/0.4	≤0.025
Description	A kind of high carbon steel with better spheroidized structure, good hardness and abrasion resistance, high resist hardening crack and tempering stability.							
Size and shape (millimeter)	Flats: 20-400×200-1000 Bars: Φ50-Φ600							

Cold work die steel

Cr12/D3/1.2080/SKD1

Similar to Other foreign Grade	ASTM D3		GB Cr12		JIS SKD1		DIN 1.2080		Böhler	
	Standard	C	Si	Mn	P	S	Cr	Mo	V	W
Composition%	GB/T1299-2000	2.00-2.30	≤0.40	≤0.40	0.030	0.030	11.50-13.00			
Description	A kind of cold work tool steel in widespread use, belonging to ledeburitic steel of high-carbon and high-chromium; With quite good hardenability and abrasion resistance, but small quenching distortion; With not good impact toughness, be liable to fracture and form inhomogenous eutectic carbides.									
Application	Commonly used for manufacturing cold work moulds of excellent abrasion resistance with light shock loads, punch heads, cold cutting scissors, drill bushes, gauges, wire drawing dies, stamping dies, wire drawing sheets, drawing dies, thread rolling dies, etc.									
Heat treatment	1) Quenching, 950~1000℃ oil colling; 2) Quenching 980℃, oil cooling, 180℃ tempering 2h									
Size and shape (millimeter)	Flats: 20-400×200-1000 Bars: Φ50-Φ600									
Delivery condition	Annealing, hardness is below 269 HBW									

For more information, please refer to our website at www.risunsteel.com