45# · 40Cr · 42CrMo / 9 类产品 · 9 PRODUCTS

镀铬轴、磨光圆与调质棒

Chrome-Plated Shafts, Ground Bars and Q&T Bars

冷拉、剥皮与矫直，感应调质与高频淬火，无心磨削与抛光，数控定尺切割，都在常州武进自有工厂完成。镀硬铬和机加工由长期合作厂按义欣规格完成，回厂后复核镀层厚度、直径和表面。

Cold drawing, peeling and straightening, induction Q&T and hardening, centerless grinding, polishing and CNC cutting are done in our own plant in Wujin, Changzhou. Hard chrome plating and machining are done by long-term partners to our specification; we re-check chrome thickness, diameter and surface on return.

让每一支轴更可靠 Making every shaft more reliable

约 6000 m²
常州武进生产基地
production site in Wujin, Changzhou

12 台
无心磨床（80 型 10 台、83 型 2 台）
centerless grinders

4 条
感应热处理线（调质 2 条 + 高频淬火 2 条）
induction lines: 2 Q&T, 2 hardening

Φ4–140 mm
常规直径，定做至 Φ200 mm
standard range; up to Ø200 mm made to order

第三方验证
Third-party checks

2026 年 6 月，Intertek 天祥对义欣做了生产与贸易现场评估（有效期至 2027 年 6 月）。2026 年 7 月，样品棒料送第三方检测机构检测：江苏隐石检验检测（CMA、CNAS L18906；成分、硬度、拉伸、硬化层），江苏赛德帕蒂测量技术（CNAS L11694；尺寸、圆度、粗糙度）。主要结果见第 4 页。

Intertek carried out an onsite production and trading assessment in June 2026 (valid to June 2027). In July 2026, sample bars were tested by third-party laboratories: Jiangsu Yinshi (CMA, CNAS L18906; composition, hardness, tensile, case depth) and Jiangsu TPM (CNAS L11694; dimensions, roundness, roughness). Key results on page 4.

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9 类产品，先按基体状态和表面选型

Nine products – choose by base condition and surface first

	产品 · 适合方向 Product · typical use	材料与状态 Grade & condition	直径 Diameter	硬度 Hardness
镀铬轴 Chrome-plated shafts				
	45# 镀铬软轴 **45 Steel Chrome-Plated Soft Shaft** 支撑与导向；后续车铣钻加工 · Support, guidance, further machining	45#，不做高频淬火 45, not induction hardened	常规 Φ4–140 mm，定做至 Φ200 mm Standard Ø4–140, to Ø200 to order	基体约 HRC17，便于后续加工 Base ≈ HRC17, easy to machine
	45# 镀铬硬轴 **45 Steel Induction-Hardened Chrome Shaft** 导柱与导向；油缸及运动部件 · Guide pillars, cylinders, moving parts	45#，高频淬火后镀铬 45, induction hardened, then chrome plated	Φ4–130 mm Ø4–130 mm	淬硬层 ≥ HRC55，有效硬化层约 2 mm Case ≥ HRC55, ≈ 2 mm deep
	45# 镀铬直线光轴 **45 Steel Chrome-Plated Linear Shaft** 直线运动机构；自动化设备 · Linear motion, automation	45#，与镀铬硬轴同一路线 45, same route as the hardened chrome shaft	Φ4–130 mm；直线轴承配合常用 0 ~ -0.02 mm Ø4–130; 0/–0.02 mm typical for linear bearings	淬硬层 ≥ HRC55，有效硬化层约 2 mm Case ≥ HRC55, ≈ 2 mm deep
磨光圆 Ground round bars				
	45# 磨光圆 **45 Steel Ground Round Bar** 轴类零件备料；机加工圆料 · Shaft stock, round stock for machining	45#，非调质 45, not heat treated	常规 Φ4–140 mm，定做至 Φ200 mm Standard Ø4–140, to Ø200 to order	约 HRC17（供货状态） ≈ HRC17 as supplied
	45# 调质磨光圆 **45 Steel Q&T Ground Round Bar** 高负载轴类零件；传动部件 · Loaded shafts, transmission parts	45#，感应调质 45, induction Q&T	Φ8–140 mm（调质最小 Φ8） Ø8–140 mm (Q&T from Ø8)	表面 HRC25 ~ 28 或 HRC28 ~ 32，按订单选择；芯部低于表面 Surface HRC25–28 or 28–32 per order; core softer
	40Cr 调质磨光圆 **40Cr Q&T Ground Round Bar** 传动轴备料；需 40Cr 基体的轴件 · Transmission-shaft stock	40Cr，感应调质 40Cr, induction Q&T	Φ5–140 mm Ø5–140 mm	调质硬度 HRC28 ~ 35 Q&T hardness HRC28–35
调质镀铬棒 Q&T chrome-plated bars				
	45# 调质镀铬棒 **45 Steel Q&T Chrome-Plated Bar** 高负载导向件；运动部件 · Loaded guides, moving parts	45#，调质基体后镀铬 45, Q&T base, chrome plated	Φ8–140 mm（调质最小 Φ8） Ø8–140 mm (Q&T from Ø8)	基体表面 HRC25 ~ 28 或 HRC28 ~ 32，按订单选择；芯部低于表面 Base surface HRC25–28 or 28–32 per order; core softer
	40Cr 调质镀铬棒 **40Cr Q&T Chrome-Plated Bar** 传动与导向；高负载运动部件 · Drives, guides, loaded moving parts	40Cr，调质基体后镀铬 40Cr, Q&T base, chrome plated	Φ8–140 mm，按需定做 Ø8–140 mm, made to order	调质硬度 HRC28 ~ 35 Q&T hardness HRC28–35
	42CrMo 调质镀铬棒 新增 NEW **42CrMo Q&T Chrome-Plated Bar** 重载、承受冲击的液压与运动部件 · Heavy and shock loads	42CrMo，调质基体后镀铬 42CrMo, Q&T base, chrome plated	Φ8–100 mm，订货：1 吨起，7–10 天 Ø8–100 mm, to order: from 1 t, 7–10 days	调质硬度 HRC30 ~ 38 Q&T hardness HRC30–38

镀铬产品：单边硬铬层 10 ~ 50 μm，按订单定制；硬铬层硬度可达 HV800+；镀铬面 Ra ≤ 0.4 μm，磨光面 Ra ≤ 0.8 μm。

Chrome products: 10–50 μm per side, chosen per order; chrome hardness can reach HV800+; Ra ≤ 0.4 μm chrome, Ra ≤ 0.8 μm ground.

牌号：45#（GB/T 699-2015）可比 C45、S45C、SAE 1045；40Cr（GB/T 3077-2015）可比 41Cr4、SCr440；42CrMo（GB/T 3077-2015）可比 42CrMo4、SCM440。外国牌号仅供参考，材质证明按钢厂原件提供。

Grades: 45 to GB/T 699-2015, 40Cr and 42CrMo to GB/T 3077-2015. Foreign grades named here are comparable, for reference only; the steel mill certificate is forwarded unaltered.

常规规格、工艺能力与分工

Standard specifications, process capability and who does what

0.02 mm	10–50 μm	HV800+	约 2 mm
公差带可按图纸做到 tolerance band to drawing	单边硬铬层，按订单定制 chrome per side, chosen per order	硬铬层硬度可达 chrome hardness capability	高频淬火有效硬化层，淬硬层 ≥ HRC55 induction-hardened case, ≥ HRC55

常规规格 Standard specifications

直径 Diameter	常规 Φ4–140 mm，定做至 Φ200 mm；各产品范围见第 2 页 Standard range Ø4–140 mm, up to Ø200 mm made to order; per-product ranges on page 2
公差 Tolerance	Φ4–11：-0.02 ~ -0.05 mm；Φ12 以上可选 0 ~ -0.02、-0.01 ~ -0.03、-0.02 ~ -0.05 mm；直线轴承常用 0 ~ -0.02 mm Ø4–11: –0.02/–0.05 mm · from Ø12: 0/–0.02, –0.01/–0.03 or –0.02/–0.05 mm · 0/–0.02 mm typical for linear bearings
直线度 Straightness	Φ25 以上约 0.1 mm/m；Φ25 以下约 0.2 mm/m ≈ 0.1 mm/m from Ø25 · ≈ 0.2 mm/m below Ø25
表面粗糙度 Roughness	镀铬 Ra ≤ 0.4 μm；磨光 Ra ≤ 0.8 μm Chrome Ra ≤ 0.4 μm · ground Ra ≤ 0.8 μm
调质硬度 Q&T hardness	45# 保证表面硬度 HRC25 ~ 28 或 HRC28 ~ 32（按订单选择）；40Cr HRC28 ~ 35；42CrMo HRC30 ~ 38。受 45# 钢淬透性限制，45# 芯部硬度低于表面（送检样品芯部约 HRC22），不保证芯部硬度，这不属于硬度不达标。 Grade 45: surface hardness HRC25–28 or 28–32, chosen per order · 40Cr HRC28–35 · 42CrMo HRC30–38. Grade 45 has limited hardenability, so its core is softer than the surface (about HRC22 on the tested sample); core hardness is not guaranteed and this is not a defect.
耐蚀 Corrosion	盐雾性能不在标准规格里；需要盐雾等级时，加厚镀层，并可委托第三方实验室按单检测。 Salt-spray performance is not part of the standard specification. Where a rating is required, we specify a thicker chrome layer and can have the order tested by a third-party laboratory.
长度与切割 Length & cutting	整支 4 / 6 / 7.5 / 8.1 m；200 mm 以上定尺切割，余量约 3 mm，默认不倒角 Full bars 4 / 6 / 7.5 / 8.1 m; cut to length from 200 mm (≈ 3 mm allowance), ends left as sawn
证书与检测 Certificates	可提供材质证明（钢厂原件）。超声波探伤、金相分析和盐雾试验，按订单委托有资质的第三方实验室完成，检测方法、项目与报告形式在报价中约定 Steel mill certificate for each heat, forwarded unaltered. Ultrasonic, metallographic and salt-spray tests are done by qualified third-party labs per order, with method, items and report agreed in the quotation

工序分工 Who does what

义欣自有工序 In our own plant

- 冷拉、剥皮与矫直 Drawing, peeling, straightening
- 感应调质与高频淬火 Induction Q&T and hardening
- 无心磨削与抛光 Centerless grinding, polishing
- 数控定尺切割 CNC cut-to-length

长期合作厂，按义欣规格 Partners, to our specification

- 镀硬铬（回厂复核镀层厚度、直径、表面） Hard chrome, re-checked on return
- 机加工：车、铣、螺纹 Machining: turning, milling, threads

自有检测 In-house checks

三丰外径千分尺 Mitutoyo micrometers	直径与公差
镀层测厚仪 Coating thickness gauge	硬铬层厚度
洛氏硬度计 Rockwell tester	调质与淬火硬度
光谱仪 Spectrometer	材质成分复核

主要设备 Main equipment

联合拉拔机 Combined drawing machine	1 台
剥皮机 Bar peeling machine	1 台
滚压式滚光矫直机 Cross-roll straighteners	2 台
点校式校直机 Point straightening presses	2 台
感应调质生产线 Induction Q&T lines	2 条
高频淬火生产线 Induction hardening lines	2 条
80 型无心磨床 Centerless grinders, type 80	10 台
83 型无心磨床 Centerless grinders, type 83	2 台
抛光机 Polishing machines	6 台
卧式数控锯床 Horizontal CNC band saws	6 台
圆锯数控切割机 CNC circular saws	2 台

以上为义欣的工艺能力。每个规格的最终数值，以双方确认的图纸、规格书和订单为准。

Typical process capability. Final values for each size are fixed on the confirmed drawing, specification and order.

检测结果、订货条款与询价清单

Test results, terms and the RFQ checklist

Intertek 天祥
现场评估：生产 + 贸易
2026 年 6 月评估，有效期至 2027 年 6 月 · 485557866_P+T
Onsite production & trading assessment, June 2026, valid to June 2027

江苏隐石检验检测
CMA · CNAS L18906
成分、硬度、拉伸、有效硬化层 · 2026 年 7 月
Jiangsu Yinshi: composition, hardness, tensile, case depth · July 2026

江苏赛德帕蒂测量技术
CNAS L11694
直径、圆度、直线度、粗糙度 · 2026 年 7 月
Jiangsu TPM: diameter, roundness, straightness, roughness · July 2026

45# 调质磨光圆 45 steel Q&T ground bar	表面 HV10 292.6 / 297.2 / 298.3（约合 HRC29）；抗拉强度 863 MPa，下屈服强度 576 MPa，断后伸长率 23.0%；Ra 0.384 μm，圆度 0.004-0.006 mm Surface HV10 292.6 / 297.2 / 298.3 (≈ HRC29) · Rm 863 MPa, ReL 576 MPa, A 23.0% · Ra 0.384 μm, roundness 0.004-0.006 mm	2026-YS-26070183118-1 TPM-TR 2607015-1
40Cr 调质磨光圆 40Cr Q&T ground bar	芯部 HRC 34.8 / 35.1 / 35.6；抗拉强度 1051 MPa，屈服强度 Rp0.2 920 MPa，断后伸长率 18.5%；Ra 0.284 μm，圆度 0.001-0.005 mm Core HRC 34.8 / 35.1 / 35.6 · Rm 1051 MPa, Rp0.2 920 MPa, A 18.5% · Ra 0.284 μm, roundness 0.001-0.005 mm	2026-YS-26070183118-2 TPM-TR 2607015-2
45# 高频淬火镀铬硬轴 45 steel induction-hardened chrome shaft	有效硬化层 SHD475 = 1.91 mm，距表面 0.1-0.8 mm 处 HV1 757-783（该报告未加 CMA/CNAS 标识） Case depth SHD475 = 1.91 mm, HV1 757-783 at 0.1-0.8 mm (report without CMA/CNAS mark)	2026-YS-26070183118-3-2

2026 年 7 月送检的单支样品棒料（约 Φ20 × 225 mm），结果只代表送检样品，不代表每批交货。已公开的完整报告见 yxrod.com/quality；江苏隐石报告上的二维码可向检测机构核验。
Single sample bars (about Ø20 × 225 mm) tested in July 2026; results describe those samples only, not every delivery. Published full reports at yxrod.com/en/quality; Yinshi reports carry a QR code for verification with the laboratory.

出口条款 Export terms

起订量 MOQ	1 吨起，规格可凑；样品 20 ~ 50 kg 走快递，样品费下单返还，运费买家付 1 t per order, sizes combinable; 20-50 kg samples by express, fee refunded on order, buyer pays freight
交期 Lead time	现货切割 3-5 天；非标直径 7-10 天；定制热处理 10-20 天；42CrMo 7-10 天；另加订舱时间 Cut from stock 3-5 days · non-standard Ø 7-10 days · custom heat treatment 10-20 days · 42CrMo 7-10 days · plus sea-freight booking
贸易与付款 Trade terms	FOB 上海或宁波；只收电汇（T/T），预付 50%，发货前付清 FOB Shanghai/Ningbo · T/T only, 50% deposit, balance before shipment
包装 Packing	出口气泡膜 + 木箱；国内气泡膜 + 棉绳；不用钢带；可印买家品牌 Export: bubble film + wooden case; domestic: bubble film + cotton rope; no steel straps; your brand on packing
单证 Documents	商业发票、装箱单、材质证明；原产地证、第三方检验按订单安排 Invoice, packing list, mill certificate; certificate of origin and inspection per order

内贸服务 Domestic (China)

现货发货	45#、40Cr 常规规格整支订单，当天 15:00 前付款可当天发货
交期	切割订单 2 ~ 3 天发货；非标直径、定制热处理、42CrMo 等定制类产品，工期与客服协商；42CrMo 1 吨起
定尺切割	数控锯床，余量约 3 mm；80 mm 以上免费切割
物流	20 kg 内中通快递；21-100 kg 中通快运或安能；100 kg 以上融辉物流或专线送货上门；200 km 内可货拉拉当天或次日送达；急件顺丰到付
发票	一般纳税人，可开增值税专用发票和普通发票
售后	材质保真；有质量问题可退可换，如因我方质量原因，我方承担换货来回运费

询价请提供这 6 项 Six items for a faster quotation

01 产品类型与用途
Product type and application

02 材料牌号或参考牌号、热处理状态
Material grade or reference, heat-treatment condition

03 直径、长度、数量与公差
Diameter, length, quantity and tolerance

04 镀层、硬度、硬化层与端部加工
Chrome, hardness, case depth and end machining

05 检测方法、抽样与验收标准
Inspection method, sampling and acceptance criteria

06 包装、收货地与联系方式
Packing, destination and contact details

发图纸或规格询价，一个工作日内回复报价
Send a drawing or specification – quotation within one working day
电话 13524462888 · WhatsApp +86 135 2446 2888 · sales@yxrod.com
yxrod.com · yxrod.com/en · 江苏省常州市武进区雪堰镇黄堰桥103号

微信 WeChat | 中文询价 RFQ (Chinese) | 英文询价 RFQ (English) | WhatsApp