



青岛河晏钢结构有限公司
QINGDAO HEYAN STEEL STRUCTURE CO.,LTD

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产品介绍

PRODUCT INTRODUCTION

精密冷拔钢管 Precision Cold Drawn Steel Pipe

产品说明 Product Description

精密冷拔钢管是一种通过冷加工加工方法制成的无缝钢管。它是将钢坯在室温下经过多道次的冷加工,通过拉伸、轧制等加工工艺来制成。这种加工方法可以使得管材的壁厚、内外径等尺寸精度更高,表面光滑度更好,同时也能提高管材的强度和耐磨性。

精密冷拔钢管具有优异的加工性能、表面质量和机械性能,广泛应用于机械制造、汽车制造、航空航天、石油化工等领域。相比于其他制造方法,冷拔钢管制造精度更高,同工艺复杂,但生产出的钢管质量更稳定、时还具有更好的抗拉强度和耐腐蚀性能。

Precision cold-drawn steel tubes have excellent machining properties, surface quality, and mechanical performance, making them widely used in industries such as machinery manufacturing, automotive production, aerospace, and petrochemicals. Compared to other manufacturing methods, cold-drawn steel tubes offer higher precision and more complex processes, but the resulting steel tubes have more stable quality, better tensile strength, and improved corrosion resistance.

Precision cold-drawn steel tubes are seamless tubes produced through cold processing. The process involves multiple stages of cold working at room temperature, using stretching, rolling, and other processing techniques. This method results in higher dimensional accuracy for wall thickness, inner and outer diameters, and improved surface smoothness, while also enhancing the strength and wear resistance of the tubes.

精密珩磨管 Precision Honed Tube

产品说明 Product Description

珩磨是一种机械加工工艺,通过对冷拔管内孔进行往复高速磨加工,使内孔达到所需公差尺寸及表面粗糙度要求。我们可根据客户要求珩磨加工,并能达到H7、H8、H9等公差范围以及Ra0.4的粗糙度和3~5丝的椭圆度范围内,长度最长可达12m。

Honing is a machining process that involves the reciprocating high-speed grinding of the inner bore of cold drawn tubes to achieve the desired tolerance, size, and surface roughness. We offer honing services according to customer requirements, meeting tolerance ranges such as H7, H8, H9, surface roughness of Ra 0.4, and ovality within 3-5 microns. The maximum length we can process is up to 12 meters.



精密镗滚管 Precision Boring Rolling Tube

产品说明 Product Description

采用刮削滚压加工,由于表面层留有表面残余压应力,有助于表面微小裂纹的封闭,阻碍侵蚀作用的扩展。从而提高表面抗腐蚀能力,并能延缓疲劳裂纹的产生或扩大,因而提高珩磨管疲劳强度。通过滚压成型,滚压表面形成一层冷作硬化层,减少了磨削副接触表面的弹性和塑性变形,从而提高了珩磨管内壁的耐磨性,滚压后,表面粗糙度值的减小,可提高配合性质。

Using scraping and rolling processing, due to the residual compressive stress left on the surface layer, it helps to close small cracks on the surface and hinders the propagation of erosion. Thereby improving the surface corrosion resistance and delaying the generation or expansion of fatigue cracks, thus enhancing the fatigue strength of the grinding tube. By rolling forming, a cold work hardening layer is formed on the rolling surface, reducing the elastic and plastic deformation of the contact surface of the grinding pair, thereby improving the wear resistance of the inner wall of the grinding tube. After rolling, the surface roughness value is reduced, which can improve the fitting properties.



精密活塞杆 Stainless Steel Honing Cylinder

PRODUCT DESCRIPTION

精密活塞杆采用精密冷拔、精磨和高精度抛光的先进工艺制造,各项技术指标均符合并超过国家标准。可直接用于油缸、气缸、减震器、活塞杆,并广泛用于液压气动、纺织印染、印刷机械导轨、压铸机、注塑机导杆、顶杆及四柱油压机导柱;传真机、复印机、高速油印机、打印机等现代办公机械导轨等一些以精密细长轴为部件的行业和产品。

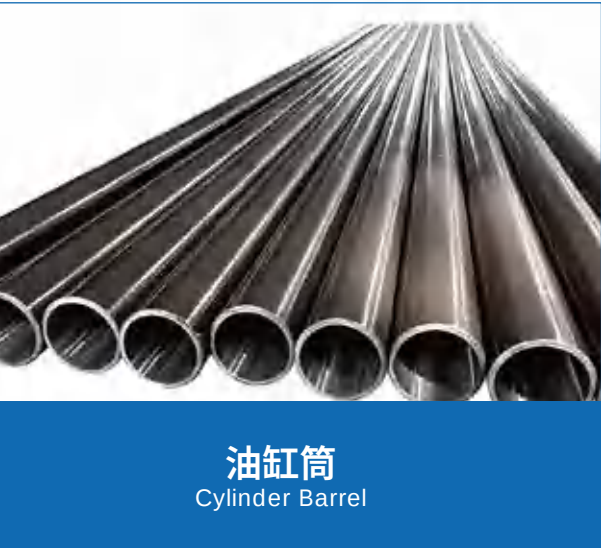
Precision piston rods are manufactured using advanced processes including precision cold drawing, fine grinding, and high-precision polishing. All technical specifications meet or exceed national standards. These rods can be directly used in hydraulic cylinders, pneumatic cylinders, shock absorbers, and pistons. They are widely used in industries and products that require precision, slender shafts, such as hydraulic and pneumatic systems, textile printing and dyeing, printing machinery guide rails, die-casting machines, injection molding machine guide rods, ejector rods, and four-column hydraulic press guide columns. They are also used in modern office equipment such as fax machines, copiers, high-speed duplicators, and printers.



产品图片
 Product Photos



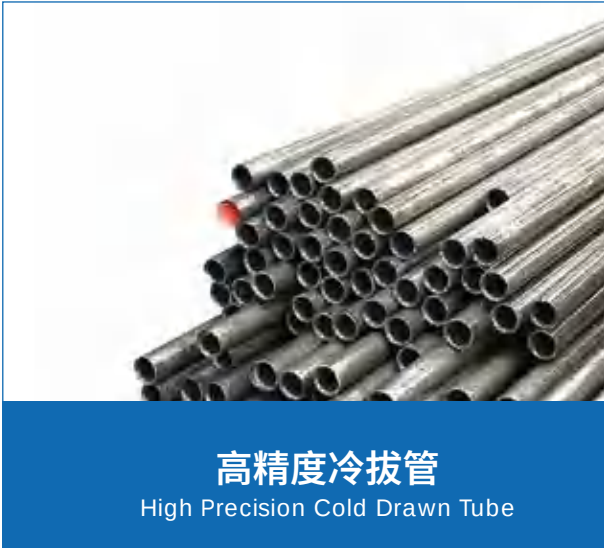
油缸筒
 Cylinder Barrel



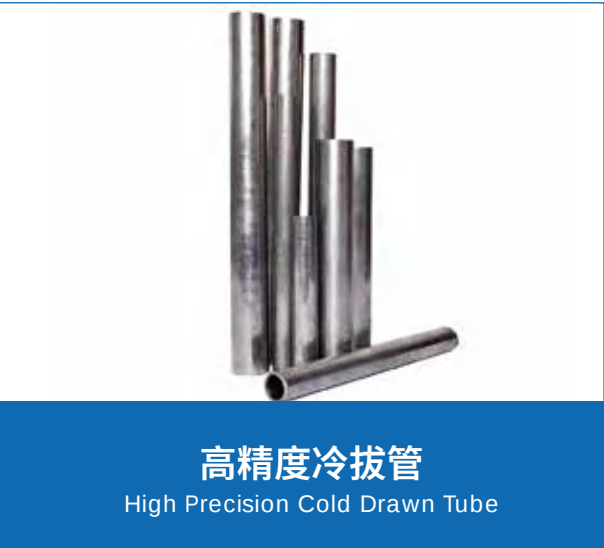
油缸筒
 Cylinder Barrel



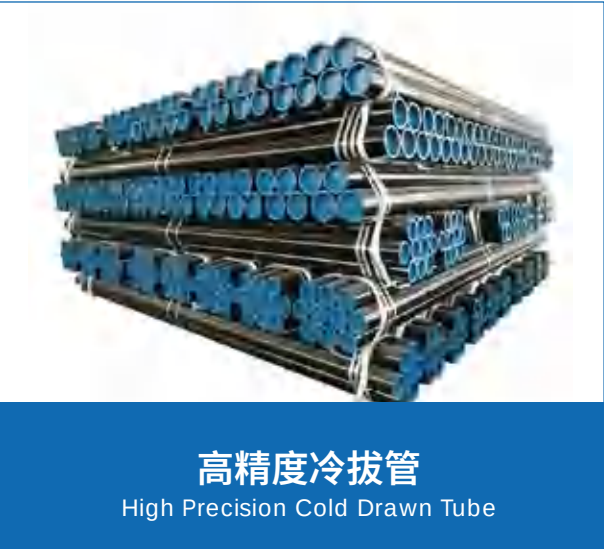
油缸筒
 Cylinder Barrel



高精度冷拔管
 High Precision Cold Drawn Tube



高精度冷拔管
 High Precision Cold Drawn Tube



高精度冷拔管
 High Precision Cold Drawn Tube

液压油缸和气缸用高精度冷拔管
 High Precision Hydraulic Cold Drawing Cylinder
 产品说明
 Product Description

产品规格
 SIZE

缸筒内径 Cylindertube ID:φ40-400mm 壁厚 Thickness:>5mm

钢管材质
 MATERIAL

E355, ST52, 20#, 45#, Q355B, Q355D Q355E, 25Mn, 27SiMn, E470, P460, P620,1026

产品标准
 STANDARD

EN10305-1:2002, EN10305-2:2002
 ASTM A519-2006, ASTM A513-2007,
 GB/T3639-2009, GB/T8713, GB/T1591-2008, GB/T17396-2009

液压、气动缸筒规格尺寸、精度
 HYDRAULIC AND PNEUMATIC CYLINDER TUBE STANDARD/SIZE/TOLERANCE

加工方式 Working Method	缸筒直径 TubelD (mm)	长度 Length (m)	直线度 Straightness (mm/m)	内径尺寸精度 Tolerance on ID	壁厚差 Tolerance on WT	内孔粗糙度 ID Roughness (μm)
冷拔 Cold Drawing	40-400	≤12m	0.2-0.5		±5%	≤1.6
冷轧 Cold Rolling	40-150	≤12m	0.2-0.5		±5%	≤0.8
冷拔-珩磨 Cold Drawing Honing	40-400	≤8m	0.2-0.3	H8-H9	±5%	≤0.4
冷拔-滚压 Cold Drawing Rolling	50-300	≤8m	0.2-0.3	H8-H9	±5%	≤0.2
深孔镗-珩磨 Deep Hole Boring Honing	250-400	≤8m	0.2-0.3	H8-H9	±5%	≤0.8
深孔镗-滚压 Deep Hole Boring Rolling	250-400	≤8m	0.2-0.3	H8-H9	±5%	≤0.4

力学性能
 MECHANICAL PROPERTY

交货状态 FinalSupply Condition 钢种 Steel Grade	冷硬		冷拔+去应力退火				
	COLD FINISHED(HARD) (BK)		COLD DRAWN AND STRESS-RELIEVED(BK+S)				
	抗拉强度 T.S6 bN/mm²	伸长率 Elongation δ 5%	抗拉强度 T.S6 bN/mm²	屈服强度 Y.S6bN/mm²	伸长率 Elongation δ 5%	硬度 Hardness HB	冲击功 Impact value (-20℃)J
20#	≥550	≥8	≥520	≥400	≥15	170	/
45#	≥680	≥5	≥630	≥520	≥12	190	/
Q355B	≥660	≥8	≥620	≥520	≥15	190	/
Q355D	≥660	≥8	≥620	≥520	≥15	190	≥27
Q355E	≥660	≥8	≥620	≥520	≥15	≥190	≥27
25Mn	≥640	≥5	≥620	≥510	≥15	190	/
27SiMn	≥780	≥8	≥700	≥580	≥10	220	/
E355	≥700	≥5	≥650	≥580	≥15	195	≥27
1026	≥640	≥8	≥620	≥510	≥15	≥190	/
E470	/	/	≥710	≥590	≥15	/	/
P460	/	/	≥710	≥590	≥15	≥190	≥27
P620	/	/	≥730	≥630	≥15	≥220	≥27

化学成分
 CHEMICAL COMPOSITION

钢种 SteelGrade	C	Si	Mn	P	S	Cr	Ni	Cu	V	Al
20#	0.17-0.23	0.17-0.37	0.35-0.65	≤0.035	≤0.035	≤0.25	≤0.30	≤0.25	/	/
45#	0.42-0.50	0.17-0.37	0.50-0.80	≤0.035	≤0.035	≤0.25	≤0.30	≤0.25	/	/
Q355B	≤0.20	≤0.50	≤1.70	≤0.035	≤0.035	≤0.30	≤0.50	≤0.30	/	/
Q355D	≤0.18	≤0.50	≤1.70	≤0.030	≤0.025	≤0.30	≤0.50	≤0.30	≤0.15	≥0.015
Q355E	0.12-0.18	0.2-0.5	1.2-1.7	≤0.025	≤0.025	≤0.30	≤0.50	≤0.20	0.04-0.15	≥0.02
25Mn	0.24-0.32	1.10-1.40	1.10-1.40	≤0.035	≤0.035	≤0.30	≤0.30	≤0.20	/	/
27SiMn	0.22-0.29	0.17-0.37	0.7-1.0	≤0.035	≤0.035	≤0.25	≤0.30	≤0.25	/	/
E355	≤0.22	≤0.55	≤1.60	≤0.025	≤0.025	/	/	/	/	≥0.02
1026	0.22-0.28	≤0.3	0.6-0.9	≤0.035	≤0.025	≤0.20	≤0.30	≤0.35	/	/
E470	0.16-0.22	0.10-0.50	1.30-1.70	≤0.030	≤0.035	/	/	/	0.08-0.15	/
P460	≤0.2	≤0.6	1.0-1.7	≤0.025	≤0.015	≤0.30	≤0.80	≤0.70	≤0.20	≥0.02
P620	≤0.2	≤0.6	1.0-1.7	≤0.025	≤0.015	≤0.30	≤0.80	≤0.30	≤0.20	≥0.02

内径公差尺寸
 INNER DIAMETER DIMENSION TOLERANCE

内径尺寸 ID(mm)	冷硬			
	COLD FINISHEDI(HARD)(BK)			
	H7	H8	H9	H10
30	+21 0	+33 0	+52 0	+52 0
> 30-50	+25 0	+39 0	+62 0	+62 0
> 50-80	+30 0	+46 0	+74 0	+74 0
> 80-120	+35 0	+54 0	+87 0	+87 0
> 120-180	+40 0	+63 0	+100 0	+100 0
> 180-250	+46 0	+72 0	+115 0	+115 0
> 250-315	+52 0	+81 0	+140 0	+140 0
> 315-400	+57 0	+89 0	+170 0	+170 0

气动缸筒
 PNEUMATIC CYLINDER TUBE

气动缸筒 UnitWeight (kg/m)	内径 IDmm	外径 ODmm	壁厚 Thickness (mm)
11.71	90	100	5
12.95	100	110	5
16.03	125	135	5
21.6	140	152	6
19.11	150	160	5
20.34	160	170	5
24.56	160	172	8
32.28	180	194	7

气动缸筒 UnitWeight (kg/m)	内径 IDmm	外径 ODmm	壁厚 Thickness (mm)
33.00	200	213	6.5
41.03	200	216	8
49.08	200	219	9.5
50.90	250	266	8
74.16	250	273	11.5
76.45	300	320	10
81.38	320	340	10
101.10	400	420	10

液压缸筒HYDRAULIC CYLINDER TUBE

液压缸筒 UnitWeight (kg/m)	内径 IDmm	外径 ODmm	壁厚 Thickness (mm)
6.78	50	60	5
9.06	50	63	6.5
10.63	50	65	7.5
14.80	50	70	10
7.52	56	66	5
8.01	60	70	5
10.66	60	73	6.5
17.26	60	80	10
11.14	63	76	6.5
14.99	63	80	8.5
18.00	63	83	10
8.63	65	75	5
13.41	65	80	7.5
9.25	70	80	5
12.26	70	83	6.5
15.39	70	86	8
19.73	70	90	10
15.26	75	90	7.5
20.96	75	95	10
13.87	80	93	6.5
16.18	80	95	7.5
22.19	80	100	10
24.68	80	102	11
32.45	80	108	14
14.67	85	98	6.5
17.11	85	100	7.5
23.43	85	105	10
14.20	90	102	6

液压缸筒 UnitWeight (kg/m)	内径 IDmm	外径 ODmm	壁厚 Thickness (mm)
18.03	90	105	7.5
21.97	90	108	9
24.66	90	110	10
30.18	90	114	12
19.88	90	115	7.5
24.19	100	118	9
28.61	100	121	10.5
37.79	100	127	13.5
24.84	100	127	8.5
29.59	110	130	10
34.46	110	133	11.5
46.24	110	140	15
24.27	110	131	8
30.83	115	135	10
35.87	115	138	11.5
39.30	115	140	12.5
23.58	115	135	7.5
32.06	120	140	10
35.54	120	142	11
42.64	120	146	13
24.51	125	140	7.5
35.09	125	146	10.5
38.71	125	148	11.5
42.38	125	150	12.5
46.11	125	152	13.5
53.70	125	156	15.5
59.53	125	159	17
38.25	130	152	11

液压缸筒HYDRAULIC CYLINDER TUBE

液压缸筒 UnitWeight (kg/m)	内径 IDmm	外径 ODmm	壁厚 Thickness (mm)
45.84	130	156	13
53.64	130	160	15
45.47	135	160	12.5
36.99	140	160	10
42.96	140	163	11.5
49.05	140	166	13
53.17	140	168	14
74.50	140	178	19
35.29	150	168	9
39.46	150	170	10
50.09	150	175	12.5
41.03	150	180	15
41.92	160	180	10
50.09	160	184	12
60.07	160	188	14
64.73	160	190	15
74.20	160	194	17
75.88	170	203	16.5
43.22	175	194	9.5

液压缸筒 UnitWeight (kg/m)	内径 IDmm	外径 ODmm	壁厚 Thickness (mm)
46.85	180	200	10
54.31	180	203	11.5
72.13	180	210	15
82.59	180	214	17
95.93	180	219	19.5
65.50	200	225	12.5
79.53	200	230	15
93.86	200	235	17.5
123.45	200	245	22.5
86.93	220	250	15
161.09	220	273	26.5
98.02	250	280	15
165.84	250	299	24.5
167.84	280	325	22.5
276.20	280	351	35.5
204.68	300	351	25.5
321.38	300	377	38.5
128.24	320	351	15.5
244.93	320	377	28.5

各种英制油缸筒INCHIN SIZE OF TUBE

内径(ID) (单位:unit,英制:inch)							
1 $\frac{1}{2}$ "	2 "	2 $\frac{1}{2}$ "	3 "	3 $\frac{1}{2}$ "	4	5 "	6 "

车间照片 WORKSHOP PHOTOS



油缸筒
Cylinder Tube



高精度冷拔管
Cold Drawn Tube



镀铬活塞杆
Chrome Plated Rod



空心轴
Hollow Chrome Plated Rod



油缸筒
Cylinder Tube



高精度冷拔管
Cold Drawn Tube



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高精度冷拔管
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镀铬活塞杆
Chrome Plated Rod



空心轴
Hollow Chrome Plated Rod

生产设备 PRODUCTION EQUIPMENT



车间照片
Plant Area



无心磨床
Centerless Grinding Machine



珩磨机
Honing Machine



矫直机
Straightening Machine



液压冷拔机
Cold Drawing Machine



数控刮削滚光机床
CNC Skived and Roller Burnished Machine



中频调质线
Medium Frequency Quenching and Tempering Line



圆盘锯
Circular Saw Machine



剥皮机
Peeling Machine

检测设备 INSPECTION EQUIPMENT



测铬仪
Chromium Meter



硬度计
Durometer



光洁仪
Cleaning Machine



金相分析仪
Metallographic Analyzer



拉力试验机
Tensile Testing Machine



显微硬度计
Microhardness Tester



超声波探伤仪
Ultrasonic Flaw Detector



光谱仪
A Spectrometer



洛氏硬度计
Rockwell Hardness Tester



盐雾机
Salt Spray Machine



三坐标
Three Coordinate



冲击试验机
Impact Testing Machine

产品图片Product Photos



镀铬活塞杆
 Chrome-Plated Piston Rod



空心轴
 Hollow Chrome Plated Shaft



镀铬活塞杆
 Chrome-Plated Piston Rod



空心轴
 Hollow Chrome Plated Shaft



活塞杆
 Piston Rod



空心轴
 Hollow Chrome Plated Shaft

活塞杆参数PISTON ROD PARAMETERS

技术特性 Technical Characteristics	
材质/ Material quality	45#, ST52, 25Mn, 20#, 20MnV6, 42CrMo4, 40Cr
尺寸/ Size	φ20-φ500mm
长度/ Length	L200-20000mm
外径公差/ Outer diameter tolerance	f7-f8(其他可定制/Other customizable options)
镀铬层厚度/ Chromium plating thickness	0.02mm-0.50mm
表面粗糙度/ Surface roughness	≤0.05um
直线度/ Straightness	≤0.1mm/m
调质硬度/ Quenching and tempering hardness	HB220-360
高频淬火/ High-frequency quenching	HRC50-60
表面硬度/ Surfacehardness	800-1150HV
表面处理/ Surfacetreatment	镀铬、中高频感应淬火、调质、调质+中高频感应淬火 Chromium plating, medium and high frequency induction hardening,quenching and tempering,quenching and tempering+ medium and high frequency induction hardening
盐雾试验/ Salt spray test	9级 150-300小时/Level9 150-300 hours
可焊接性/ Weldability	好/good
包装/ Packing	防锈油处理后每根套入防水纸管/木箱 After rust prevention ol teatment, each pice is wrapped in a waterproof paper tube / wooden box
证书/ Certificate	提供产品质量报告、镀铬厚度报告、盐雾测试报告等 Provide procluct quality reports, chromium plating thickness reports, sall spray test reports,etc
特殊要求/ Special requirements	根据客户要求定制产品/Customizing products according to customer requirements

化学成分 Chemical Composition									
材质 Material quality	C	Si	Mn	P	S	Cr	Ni	Cu	V
45#	0.42-0.50	0.17-0.37	0.50-0.80	≤0.035	≤0.035	≤0.25	≤0.30	≤0.25	/
ST52	≤0.20	≤0.50	≤1.70	≤0.035	≤0.035	≤0.30	≤0.50	≤0.30	≤0.15
25Mn	0.22-0.29	0.17-0.37	0.70-1.0	≤0.035	≤0.035	≤0.25	≤0.30	≤0.25	/
20#	0.17-0.23	0.17-0.37	0.35-0.65	≤0.035	≤0.035	≤0.25	≤0.30	≤0.25	/
20MnV6	0.16-0.22	0.10-0.50	1.30-1.70	≤0.035	≤0.035	≤0.30	≤0.30	≤0.30	0.10-0.20
42CrMo4	0.38-0.45	0.15-0.40	0.60-0.90	≤0.30	≤0.035	0.9-1.20	/	/	/
40Gr	0.37-0.45	0.17-0.37	0.50-0.80	≤0.035	≤0.035	0.8-1.10	≤0.30	≤0.30	/

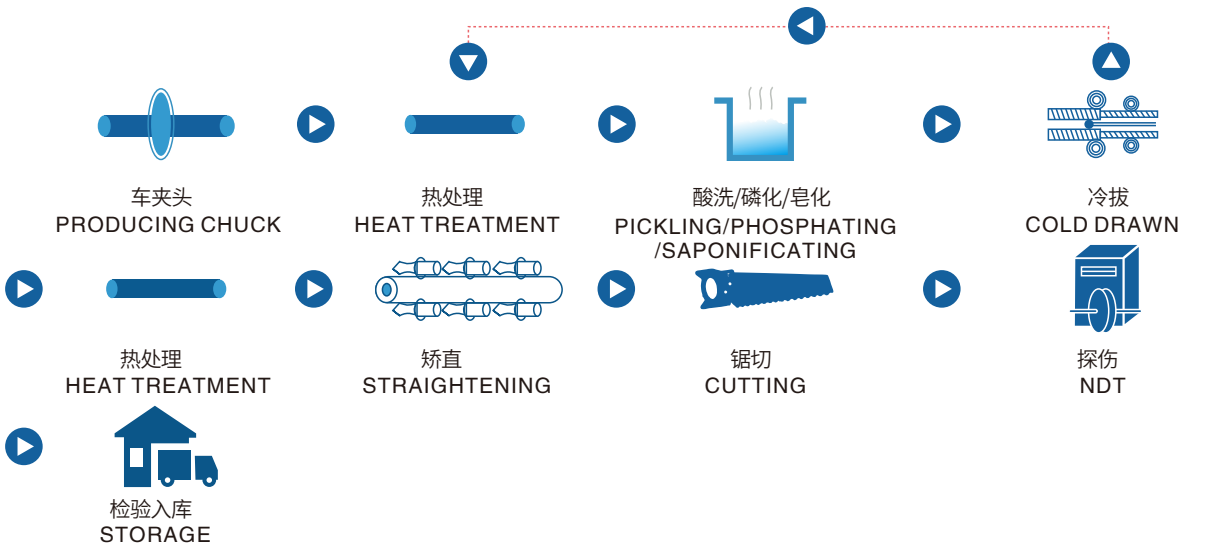
力学性能 Mechanical Property				
材质 Material quality	抗拉强度 Tensilestrength N/mm ² (MPa)	屈服强度 Yield strength N/mm ² (MPa)	伸长率 Elongation E%	冲击功 Impactenergy J
45#冷拔/45#Cold drawn	≥630	≥540	≥15	≥41
45#调质/45#Quenching and tempering	≥800	≥630	≥20	≥41
Q345D冷拔/Q345D cold drawn	≥620	≥520	≥15	≥27(-20℃)
25Mn 冷拔/25Mn cold drawn	≥620	≥520	≥15	/
20# 冷拔/20# cold drawn	≥520	≥400	≥15	/
20Mn V6	≥750	≥590	≥12	≥40
42CrMo4	≥980	≥850	≥14	≥47
40Cr	≥1000	≥800	≥10	/

实心镀铬活塞杆参数
 Solid Chrome Plated Piston Rod Parameters

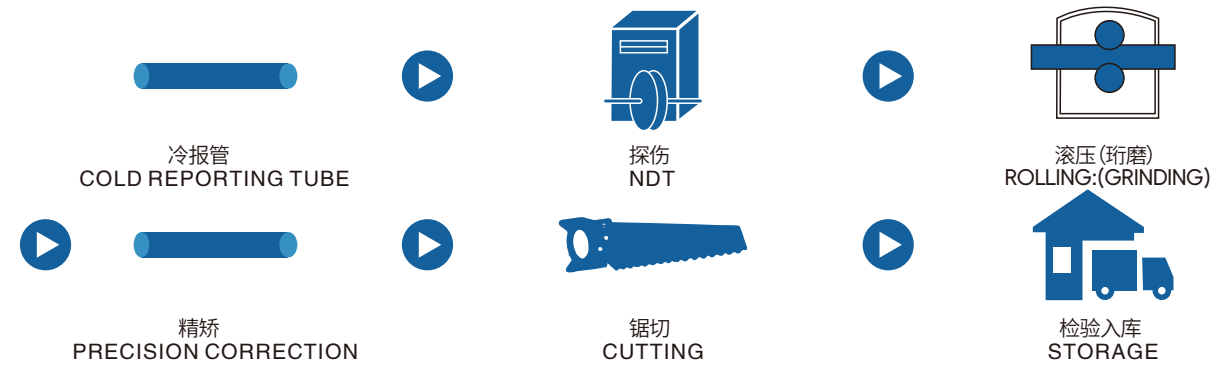
技术特性 Technical Characteristics						
规格 Specifications	每米重 Weight Per Metar	镀铬面积 Chromium plating area	公差f7 Tolerance f7	公差f8 Tolerance f8	公差f9 Tolerance f9	备注 Remarks
Φ 20	2.5	6.28	0.02-0.041	0.02-0.053	0.02-0.072	Negative tolerance
Φ 22	3	6.9	0.02-0.041	0.02-0.053	0.02-0.072	Negative tolerance
Φ 25	3.9	7.85	0.02-0.041	0.02-0.053	0.02-0.072	Neaative tolerance
Φ 28	4.8	8.8	0.02-0.041	0.02-0.053	0.02-0.072	Neaative tolerance
Φ 30	5.6	9.4	0.02-0.041	0.02-0.053	0.02-0.072	Negative tolerance
Φ 32	6.3	10	0.025-0.05	0.02-0.064	0.02-0.087	Negative tolerance
Φ 35	7.6	11	0.025-0.05	0.02-0.064	0.02-0.087	Negative tolerance
Φ 36	8	11.3	0.025-0.05	0.02-0.064	0.02-0.087	Neaative tolerance
Φ 38	8.9	11.9	0.025-0.05	0.02-0.064	0.02-0.087	Negative tolerance
Φ 40	9.9	12.6	0.025-0.05	0.02-0.064	0.02-0.087	Negative tolerance
Φ 45	12.5	14.1	0.025-0.05	0.02-0.064	0.02-0.087	Negative tolerance
Φ 50	15.4	15.7	0.025-0.05	0.02-0.064	0.02-0.087	Negative tolerance
Φ 55	18.7	17.3	0.03-0.06	0.03-0.076	0.03-0.104	Negative tolerance
Φ 56	19.3	17.6	0.03-0.06	0.03-0.076	0.03-0.104	Negative tolerance
Φ 60	22.2	18.8	0.03-0.06	0.03-0.076	0.03-0.104	Neaative tolerance
Φ 63	24.5	19.8	0.03-0.06	0.03-0.076	0.03-0.104	Neaative tolerance
Φ 65	26.1	20.4	0.03-0.06	0.03-0.076	0.03-0.104	Negative tolerance
Φ 70	30.2	22	0.03-0.06	0.03-0.076	0.03-0.104	Negative tolerance
Φ 75	34.7	23.6	0.03-0.06	0.03-0.076	0.03-0.104	Negative tolerance
Φ 80	39.5	25.1	0.03-0.06	0.03-0.076	0.03-0.104	Neaative tolerance
Φ 85	44.6	26.7	0.036-0.071	0.036-0.09	0.036-0.123	Negative tolerance
Φ 90	50	28.3	0.036-0.071	0.036-0.09	0.036-0.123	Negative tolerance
Φ 95	55.7	29.8	0.036-0.07	0.036-0.09	0.036-0.123	Negative tolerance
Φ 100	61.7	31.4	0.036-0.071	0.036-0.09	0.036-0.123	Negative tolerance
Φ 105	68	33	0.036-0.071	0.036-0.09	0.036-0.123	Negative tolerance
Φ 110	74.7	34.5	0.036-0.071	0.036-0.09	0.036-0.123	Negative tolerance
Φ 115	81.6	36.1	0.036-0.071	0.036-0.09	0.036-0.123	Neaative tolerance
Φ 120	88.8	37.7	0.036-0.071	0.036-0.09	0.036-0.123	Neaative tolerance
Φ 125	96	39.3	0.043-0.083	0.043-0.106	0.043-0.143	Negative tolerance
Φ 130	104.3	40.8	0.043-0.083	0.043-0.106	0.043-0.143	Negative tolerance
Φ 140	120.9	44	0.043-0.083	0.043-0.106	0.043-0.143	Negative tolerance
Φ 150	138.8	47.1	0.043-0.083	0.043-0.106	0.043-0.143	Neaative tolerance
Φ 160	157.9	50.2	0.043-0.083	0.043-0.106	0.043-0.143	Negative tolerance
Φ 170	178.3	53.4	0.043-0.083	0.043-0.106	0.043-0.143	Negative tolerance
Φ 180	199.9	56.5	0.043-0.083	0.043-0.106	0.043-0.143	Negative tolerance
Φ 190	222.7	59.7	0.05-0.096	0.05-0.122	0.05-0.165	Negative tolerance
Φ 200	246.8	62.8	0.05-0.096	0.05-0.122	0.05-0.165	Negative tolerance
Φ 210	272.1	66	0.05-0.096	0.05-0.122	0.05-0.165	Negative tolerance
Φ 220	298.6	69.1	0.05-0.096	0.05-0.122	0.05-0.165	Neaative tolerance
Φ 230	326.4	72.2	0.05-0.096	0.05-0.122	0.05-0.165	Neaative tolerance
Φ 240	355.4	75.4	0.05-0.096	0.05-0.122	0.05-0.165	Negative tolerance
Φ 250	385.6	78.5	0.05-0.096	0.05-0.122	0.05-0.165	Negative tolerance

生产工艺流程
 MANUFACTURING PROCESS

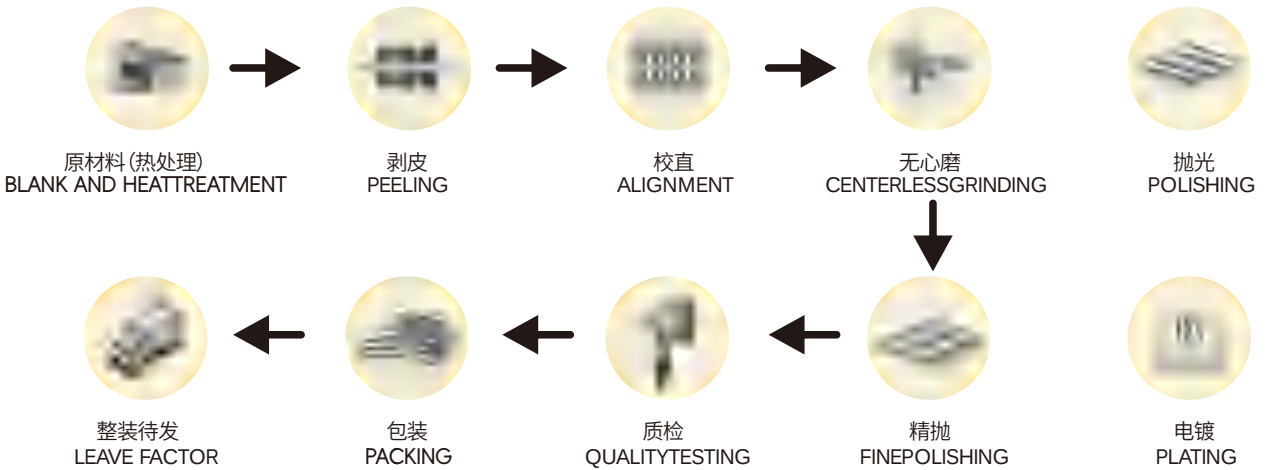
冷拔工艺流程
 MANUFACTURING PROCESS OF CLOD DRAWN



滚压(珩磨)工艺流程
 ROLLING(GRINDING)PROCESSFLOW



活塞杆/空心轴工艺流程
 ROLLING(GRINDING)PROCESSFLOW



油缸缸筒应用领域 APPLICATION FIELDS OF OIL CYLINDER BARREL



传动运输辊体管应用领域 APPLICATION FIELD OF TRANSMISSION AND TRANSPORT ROLLER BODY TUBE

