

中华人民共和国国家标准

通用冷弯开口型钢尺寸、
外形、重量及允许偏差

Cold forming sectional steel-Open
sectional steel for general structure-
Dimension, form, weight and
permissible deviations

GB 6723—86









国家标准局发布

1986-08-22 发布 1987-07-01 实施

本标准适用于用可冷加工变形的冷轧或热轧钢带在连续辊式冷弯机组上生产的通用冷弯开口型钢。以下简称型钢。
不适用于以拉拔、冲压、弯折等方式生产的冷弯型钢。

1 分类、代号

型钢按其形状分为8种，其代号为：

- 冷弯等边角钢 
- 冷弯不等边角钢 
- 冷弯等边槽钢 
- 冷弯不等边槽钢 
- 冷弯内卷边槽钢 
- 冷弯外卷边槽钢 
- 冷弯Z形钢 
- 冷弯卷边Z形钢 

2 截面尺寸及允许偏差

2.1 型钢截面形状及标注符号分别如图1~图8所示。

2.2 型钢的尺寸、截面面积、理论重量及主要参数列于表1~表8。经双方协议，可供应表1~表8所列尺寸以外的型钢。

2.3 弯曲角部分的内圆弧半径应符合表9的规定。

2.4 尺寸允许偏差

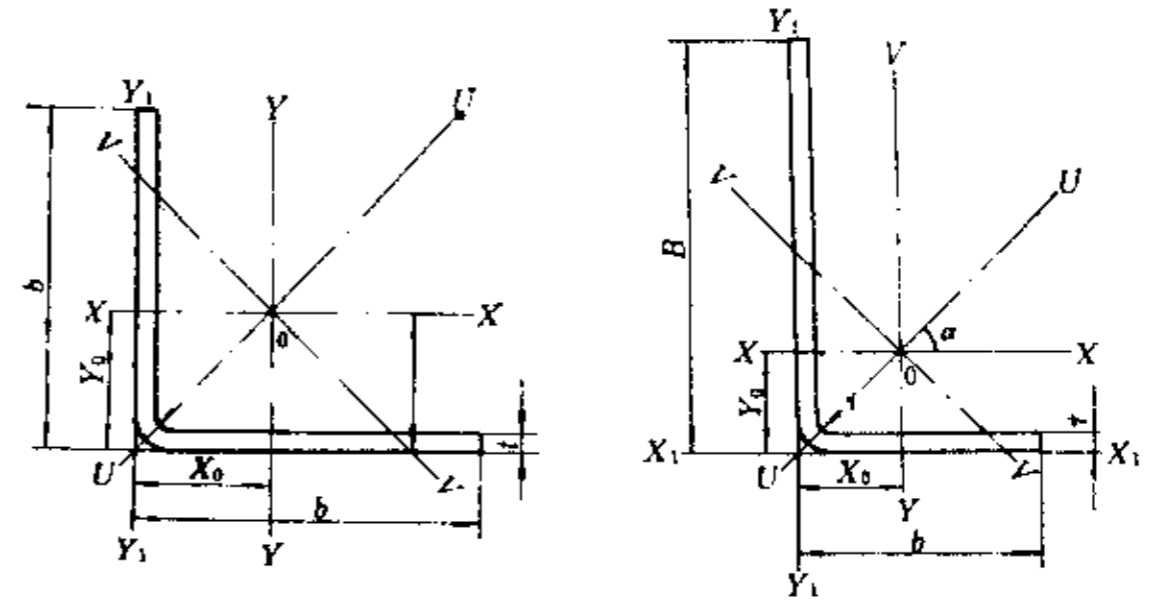


图1 冷弯等边角钢

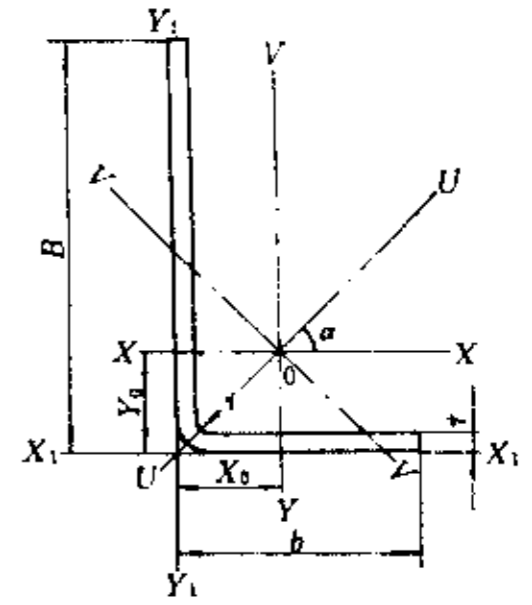


图2 冷弯不等边角钢

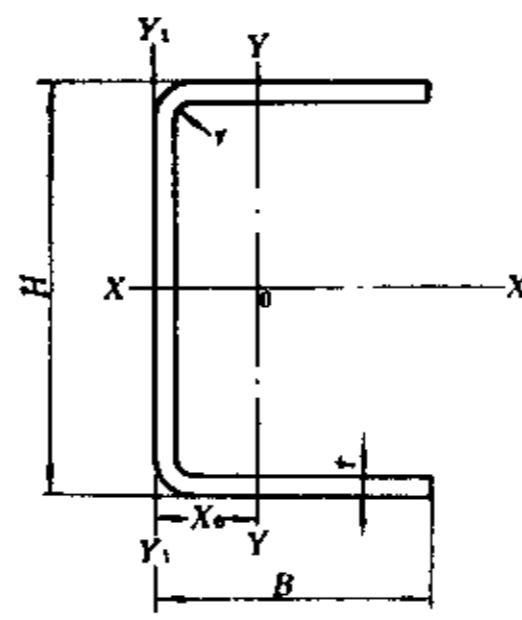


图3 冷弯等边槽钢

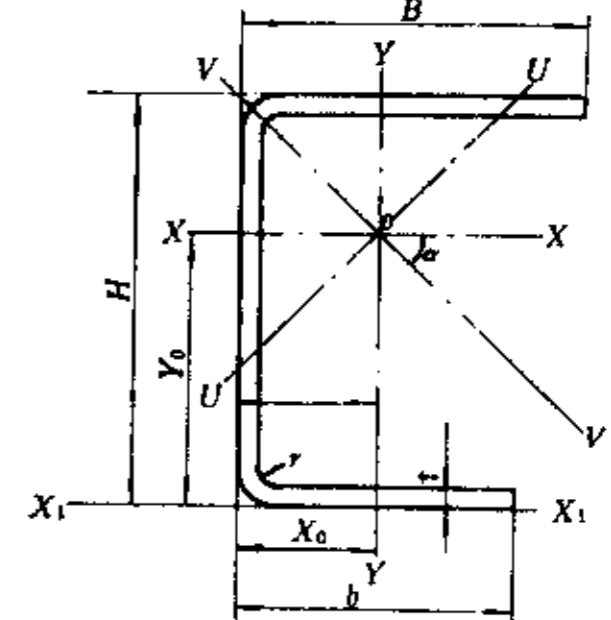


图4 冷弯不等边槽钢

2.4.1 型钢非自由边长的允许偏差应符合表10的规定。

2.4.2 型钢自由边长的允许偏差应符合表11的规定。

冷弯等边角钢基本尺寸与主要参数

表1

名称	尺寸(mm)		理论重量 (kg/m)	截面面积 (cm ²)	重心(cm) Y ₀	惯性矩 (cm ⁴)			回转半径 (cm)			截面模数 (cm ³)	
	b	t				I _x = I _y	I ₀	I _v	r _x = r _y	r ₀	r _v	W _{y_{max}} = W _{y_{min}}	W _{x_{max}} = W _{x_{min}}
20×20×1.2	20	1.2	0.354	0.461	0.559	0.179	0.292	0.066	0.630	0.804	0.385	0.321	0.124
20×20×1.6		1.6	0.463	0.588	0.579	0.230	0.377	0.084	0.625	0.800	0.377	0.398	0.162
20×20×2.0		2.0	0.566	0.721	0.599	0.278	0.457	0.039	0.621	0.796	0.371	0.464	0.198
25×25×1.6	25	1.6	0.588	0.749	0.704	0.464	0.756	0.172	0.786	1.004	0.479	0.659	0.258
25×25×2.0		2.0	0.723	0.921	0.724	0.563	0.922	0.205	0.782	1.000	0.472	0.778	0.317
25×25×2.5		2.5	0.885	1.127	0.749	0.679	1.117	0.242	0.776	0.995	0.463	0.907	0.388
25×25×3.0		3.0	1.039	1.323	0.774	0.786	1.298	0.275	0.770	0.990	0.456	1.016	0.455
30×30×1.6	30	1.6	0.714	0.909	0.829	0.817	1.328	0.307	0.948	1.208	0.581	0.986	0.376
30×30×2.0		2.0	0.880	1.121	0.849	0.998	1.626	0.369	0.943	1.204	0.573	1.175	0.464
30×30×2.5		2.5	1.081	1.377	0.874	1.210	1.981	0.439	0.937	1.199	0.565	1.385	0.560
30×30×3.0		3.0	1.274	1.623	0.898	1.409	2.316	0.503	0.931	1.194	0.556	1.568	0.671
40×40×1.6		40	1.6	0.965	1.229	1.079	1.985	3.213	0.758	1.270	1.616	0.785	1.839
40×40×2.0	2.0		1.194	1.521	1.099	2.438	3.956	0.919	1.265	1.612	0.777	2.218	0.840
40×40×2.5	2.5		1.473	1.877	1.123	2.979	4.851	1.108	1.259	1.607	0.768	2.651	1.036
40×40×3.0	3.0		1.745	2.223	1.148	3.496	5.710	1.282	1.253	1.602	0.759	3.043	1.226
40×40×4.0	4.0		2.266	2.886	1.198	4.455	7.320	1.590	1.242	1.592	0.742	3.717	1.590
50×50×2.0	50	2.0	1.508	1.921	1.349	4.848	7.845	1.850	1.588	2.020	0.981	3.593	1.327
50×50×2.5		2.5	1.866	2.377	1.373	5.952	9.658	2.245	1.582	2.015	0.971	4.332	1.641
50×50×3.0		3.0	2.216	2.823	1.398	7.015	11.414	2.616	1.576	2.010	0.962	5.015	1.948
50×50×4.0		4.0	2.894	3.686	1.448	9.022	14.755	3.290	1.564	2.000	0.944	6.229	2.540
60×60×2.0	60	2.0	1.822	2.321	1.599	8.478	13.694	3.262	1.910	2.428	1.185	5.302	1.926
60×60×2.5		2.5	2.258	2.877	1.623	10.440	16.903	3.978	1.904	2.423	1.175	6.429	2.385
60×60×3.0		3.0	2.687	3.423	1.648	12.342	20.028	4.657	1.898	2.418	1.166	7.486	2.836
60×60×4.0		4.0	3.522	4.486	1.698	15.970	26.030	5.911	1.886	2.408	1.147	9.403	3.712
70×70×3.0	70	3.0	3.158	4.023	1.898	19.853	32.152	7.553	2.221	2.826	1.370	10.456	3.891
70×70×4.0		4.0	4.150	5.286	1.948	25.799	41.944	9.654	2.209	2.816	1.351	13.242	5.107

名称	尺寸(mm)		理论重量 (kg/m)	截面面积 (cm ²)	重心(cm)		惯性矩(cm ⁴)			回转半径(cm)			截面模数(cm ³)	
	b	t			Y ₀	I _x =I _y	I _u	I _v	r _x =r _y	r _u	r _v	W _{xmax} =W _{ymin}	W _{xmin} =W _{ymin}	
70×70×5.0	70	5.0	5.110	6.510	1.997	31.430	51.289	11.571	2.197	2.806	1.333	15.731	6.283	
80×80×3.0	80	3.0	3.629	4.623	2.148	29.921	48.386	11.456	2.543	3.234	1.574	13.925	5.113	
80×80×4.0		4.0	4.778	6.086	2.198	39.009	63.299	14.719	2.631	3.224	1.555	17.745	6.723	
80×80×5.0		5.0	5.895	7.510	2.247	47.677	77.622	17.731	2.519	3.214	1.536	21.209	8.288	
80×80×6.0		6.0	6.982	8.895	2.297	55.938	91.365	20.512	2.507	3.204	1.518	24.346	9.809	
100×100×3.0	100	3.0	4.571	5.823	2.648	59.231	95.584	22.878	3.189	4.051	1.982	22.363	8.057	
100×100×4.0		4.0	6.034	7.686	2.698	77.571	125.528	29.613	3.176	4.041	1.962	28.749	10.623	
100×100×5.0		5.0	7.465	9.510	2.747	95.237	154.539	35.335	3.164	4.031	1.943	34.659	13.132	
100×100×6.0		6.0	8.866	11.295	2.797	112.247	182.629	41.866	3.152	4.021	1.925	40.125	15.584	

冷弯不等边角钢基本尺寸与主要参数

表 2

名称	尺寸(mm)			理论重量 (kg/m)	截面面积 (cm ²)	重心(cm)		惯性矩(cm ⁴)				回转半径(cm)				截面模数(cm ³)			
	B	b	t			Y ₀	X ₀	I _x	I _y	I _u	I _v	r _x	r _y	r _u	r _v	W _{xmax}	W _{xmin}	W _{ymin}	W _{ymin}
25×15×2.0	25	15	2.0	0.566	0.721	0.897	0.370	0.463	0.131	0.524	0.070	0.801	0.426	0.852	0.312	0.516	0.289	0.354	0.116
25×15×2.5			2.5	0.688	0.877	0.926	0.392	0.553	0.156	0.627	0.082	0.794	0.422	0.845	0.306	0.597	0.351	0.398	0.141
25×15×3.0			3.0	0.803	1.023	0.956	0.414	0.633	0.178	0.718	0.093	0.786	0.417	0.837	0.302	0.662	0.410	0.431	0.164
30×20×2.0	30	20	2.0	0.723	0.921	1.011	0.490	0.860	0.318	1.014	0.164	0.966	0.587	1.049	0.421	0.850	0.132	0.648	0.210
30×20×2.5			2.5	0.885	1.127	1.040	0.513	1.038	0.382	1.226	0.193	0.959	0.582	1.042	0.414	0.998	0.529	0.744	0.257
30×20×3.0			3.0	1.039	1.323	1.068	0.536	1.201	0.441	1.421	0.220	0.952	0.577	1.036	0.408	1.123	0.621	0.823	0.301
35×20×2.0	35	20	2.0	0.802	1.021	1.230	0.452	1.314	0.332	1.461	0.185	1.134	0.570	1.195	0.426	1.068	0.579	0.734	0.214
35×20×2.5			2.5	0.983	1.252	1.260	0.474	1.590	0.400	1.769	0.220	1.126	0.565	1.188	0.419	1.261	0.710	0.842	0.262
35×20×3.0			3.0	1.156	1.473	1.290	0.496	1.845	0.462	2.055	0.252	1.118	0.560	1.181	0.413	1.429	0.835	0.931	0.307
40×25×2.5	40	25	2.5	1.179	1.502	1.373	0.593	2.510	0.791	2.878	0.423	1.292	0.725	1.384	0.530	1.827	0.955	1.333	0.415
40×25×3.0			3.0	1.392	1.773	1.402	0.615	2.929	0.921	3.364	0.486	1.285	0.720	1.377	0.523	2.089	1.127	1.495	0.488
50×30×2.5	50	30	2.5	1.473	1.877	1.706	0.674	4.962	1.419	5.597	0.783	1.625	0.869	1.726	0.645	2.907	1.506	2.193	0.610
50×30×3.0			3.0	1.745	2.223	1.735	0.696	5.822	1.660	6.576	0.907	1.618	0.864	1.719	0.638	3.354	1.783	2.382	0.720
50×30×4.0			4.0	2.266	2.886	1.794	0.741	7.419	2.104	8.395	1.128	1.603	0.853	1.705	0.625	4.134	2.314	2.838	0.931
60×40×2.5	60	40	2.5	1.866	2.377	1.939	0.913	9.078	3.376	10.655	1.790	1.954	1.191	2.117	0.867	4.682	2.235	3.694	1.094
60×40×3.0			3.0	2.216	2.823	1.967	0.936	10.704	3.972	12.590	2.085	1.946	1.186	2.111	0.859	5.441	2.654	4.241	1.296
60×40×4.0			4.0	2.894	3.686	2.023	0.981	13.774	5.091	16.239	2.625	1.932	1.175	2.098	0.843	6.807	3.163	5.181	1.686
70×40×3.0	70	40	3.0	2.452	3.123	2.402	0.861	16.301	4.142	18.092	2.351	2.284	1.151	2.406	0.867	6.785	3.545	4.810	1.319
70×40×4.0			4.0	3.208	4.086	2.461	0.905	21.038	5.317	23.381	2.973	2.268	1.140	2.391	0.853	8.546	4.635	5.872	1.718
80×50×3.0	80	50	3.0	2.923	3.723	2.631	1.096	25.450	8.086	29.092	4.144	2.614	1.473	2.795	1.092	9.670	4.740	7.371	2.071
80×50×4.0			4.0	3.836	4.886	2.688	1.141	33.025	10.449	37.810	5.664	2.599	1.462	2.781	1.076	12.281	6.218	9.151	2.708
100×60×3.0	100	60	3.0	3.629	4.623	3.297	1.259	49.787	14.347	56.038	8.096	3.281	1.761	3.481	1.323	15.100	7.127	11.389	3.026
100×60×4.0			4.0	4.778	6.086	3.354	1.304	64.939	18.640	73.177	10.102	3.266	1.719	3.467	1.307	19.356	9.772	14.289	3.960
100×60×5.0			5.0	5.895	7.510	3.412	1.349	79.395	22.707	89.566	12.536	3.251	1.738	3.453	1.291	23.263	12.053	16.830	4.882
120×80×4.0	120	80	4.0	6.034	7.686	3.822	1.782	118.259	44.089	138.750	23.598	3.922	2.394	4.248	1.752	30.940	14.460	24.737	7.090
120×80×5.0			5.0	7.465	9.510	3.878	1.827	145.259	54.023	170.642	28.640	3.908	2.383	4.235	1.735	37.456	17.884	29.557	8.752
120×80×6.0			6.0	8.866	11.295	3.934	1.873	171.269	63.552	201.446	33.375	3.893	2.372	4.223	1.718	43.533	21.234	33.928	10.372

冷弯等边槽钢基本尺寸与主要参数

表 3

名称	尺寸(mm)			理论重量 (kg/m)	截面面积 (cm ²)	重心 (cm)	惯性矩 (cm ⁴)		回转半径 (cm)		截面模数 (cm ³)		
	H	B	t				I _x	I _y	r _x	r _y	W _x	W _{ymin}	W _{ymin}
20×10×1.5	20	10	1.5	0.401	0.511	0.324	0.281	0.047	0.741	0.305	0.281	0.146	0.070
20×10×2.0			2.0	0.505	0.643	0.349	0.330	0.058	0.716	0.300	0.330	0.165	0.089
20×10×2.5			2.5	0.593	0.755	0.374	0.361	0.066	0.691	0.295	0.361	0.176	0.105
30×10×1.5	30	10	1.5	0.519	0.661	0.288	0.767	0.055	1.076	0.288	0.511	0.205	0.075
30×10×2.0			2.0	0.662	0.843	0.290	0.925	0.068	1.047	0.284	0.617	0.231	0.096
30×10×2.5			2.5	0.789	1.005	0.312	1.012	0.079	1.018	0.280	0.495	0.252	0.115
30×30×3.0	30	3.0	1.843	2.347	1.186	3.317	2.114	1.188	0.949	2.211	1.782	1.165	