

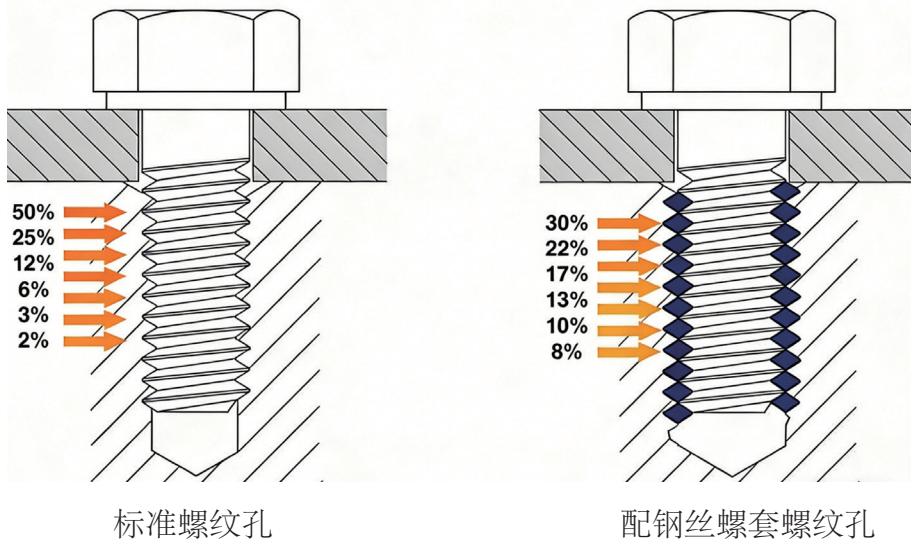


钢丝螺套

一站式紧固连接方案



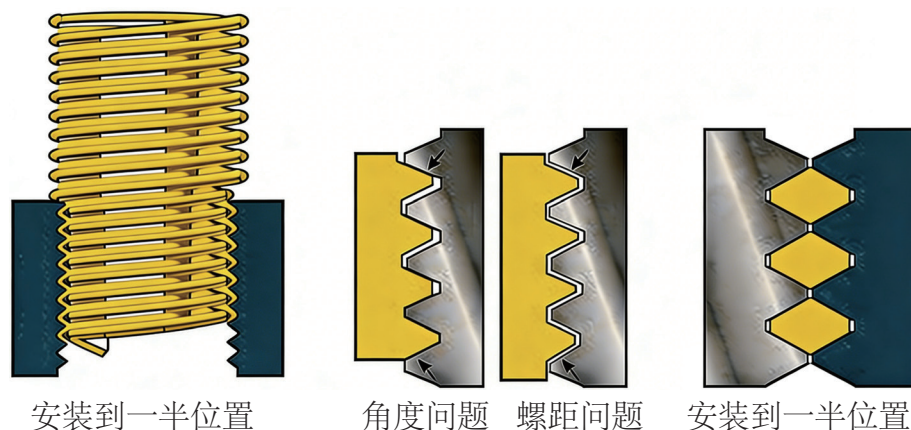
ZCJ 嵌套 - 钢丝螺套



优势

- 钢丝螺套轻而强，通常由硬化不锈钢 304 材料制成，材料硬度 HRC43-50, 材拉强度一般不低于 1370Mpa。
- 钢丝螺套可以有效提升轻合金（镁、铝等）材料的内螺纹强度至 12 级，同时钢丝螺套的使用能让内螺纹的受力更均匀，通常没有安装螺套的时候第一颗螺纹承受 50% 的力。
- 这两个优势可以让施加钢丝螺套的轻合金螺纹孔可以适配 8.8 级以上的高强度螺栓。

螺套安装过程



钢丝螺套工作方式

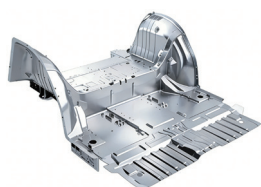
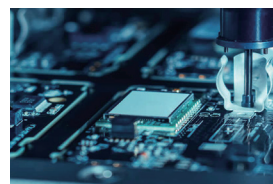
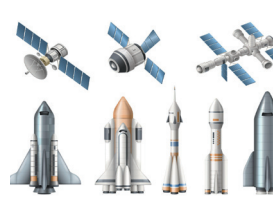
- 钢丝螺套拧入螺纹孔之后再母体材料形成永久的加强耐磨损螺纹。
- 钢丝螺套的尺寸在拧入前较螺纹孔尺寸要大，安装后将压缩到与螺纹尺寸相匹配且永久的固定在内螺纹孔。
- 钢丝螺套也可以消除应力集中问题，它可以在轴向和径一旬基材的

材质

- 材质有不锈钢 SUS304 和 SUS316, 磷青铜, 也有耐高温的 INCONEL 镍 - 表面处理有润滑和镀锡、镀锌、镀银 (高温需求) 等
- 尺寸从 M2 到 M39
- 螺牙包含粗牙和细牙
- 长度有 1D、1.5D、2D、2.5、3D 5 种常规规格, 也可以根据需要定制长度规格。
- 形式有常规和防松两种
- 样式有 2 种, 有尾和无尾
- 外观颜色可以根据需要涂红色、绿色等



行业应用



钢丝螺套底孔深尺寸

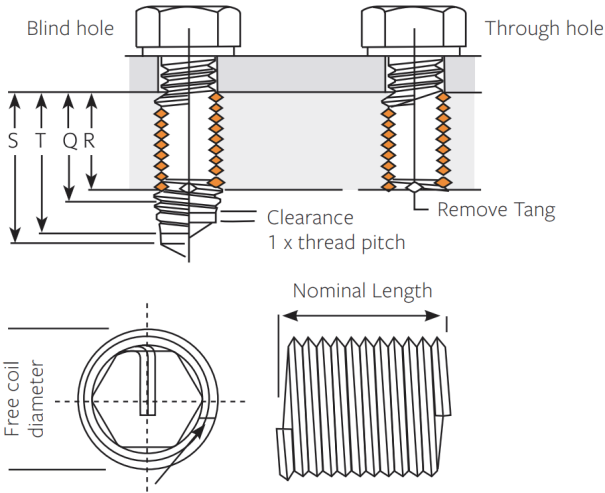
Thread Size	Basic Length of Insert in Terms of Nominal Diameter of Screw “D”																			
	1D				1.5D				2D				2.5D				3D			
	Q	R	S	T	Q	R	S	T	Q	R	S	T	Q	R	S	T	Q	R	S	T
Metric																				
M2 - 0.4	2.00	1.60	3.80	3.40	3.00	2.60	4.80	4.40	4.00	3.60	5.80	5.40	5.00	4.60	6.80	6.40	6.00	5.60	7.80	7.40
M2.2 - 0.45	2.20	1.75	4.23	3.98	3.30	2.85	5.33	4.88	4.40	3.95	6.43	5.98	5.50	5.05	7.53	7.08	6.60	6.15	8.63	8.18
M2.5 - 0.45	2.50	2.05	4.53	4.08	3.75	3.30	5.78	5.33	5.00	4.55	7.03	6.58	6.25	5.80	8.28	7.83	7.50	7.05	9.53	9.08
M3 - 0.5	3.00	2.50	5.25	4.75	4.50	4.00	6.75	6.25	6.00	5.50	8.25	7.75	7.50	7.00	9.75	9.25	9.00	8.50	11.25	10.75
M3.5 - 0.6	3.50	2.90	6.20	5.60	5.25	4.65	7.95	7.35	7.00	6.40	9.70	9.10	8.75	8.15	11.45	10.85	10.50	9.90	13.20	12.60
M4 - 0.7	4.00	3.30	7.15	6.45	6.00	5.30	9.15	8.45	8.00	7.30	11.15	10.45	10.00	9.30	13.15	12.45	12.00	11.30	15.15	14.45
M4.5 - 0.75	4.50	3.75	7.88	7.13	6.75	6.00	10.13	9.38	9.00	8.25	12.38	11.63	11.25	10.50	14.63	13.88	13.50	12.75	16.88	16.13
M5 - 0.8	5.00	4.20	8.60	7.80	7.50	6.70	11.10	10.30	10.00	9.20	13.60	12.80	12.50	11.70	16.10	15.30	15.00	14.20	18.60	17.80
M6 - 1	6.00	5.00	10.50	9.50	9.00	8.00	13.50	12.50	12.00	11.00	16.50	15.50	15.00	14.00	19.50	18.50	18.00	17.00	22.50	21.50
M7 - 1	7.00	6.00	11.50	10.50	10.50	9.50	15.00	14.00	14.00	13.00	18.50	17.50	17.50	16.50	22.00	21.00	21.00	20.00	25.50	24.50
M8 - 1	8.00	7.00	12.50	11.50	12.00	11.00	16.50	15.50	16.00	15.00	20.50	19.50	20.00	19.00	24.50	23.50	24.00	23.00	28.50	27.50
M8 - 1.25	8.00	6.75	13.63	12.38	12.00	10.75	17.63	16.38	16.00	14.75	21.63	20.38	20.00	18.75	25.63	24.38	24.00	22.75	29.63	28.38
M9 - 1.25	9.00	7.75	14.63	13.38	13.50	12.25	19.13	17.88	18.00	16.75	23.63	22.38	22.50	21.25	28.13	26.88	27.00	25.75	32.63	31.38
M10 - 1.25	10.00	8.75	15.63	14.38	15.00	13.75	20.63	19.38	20.00	18.75	25.63	24.38	25.00	23.75	30.63	29.38	30.00	28.75	35.63	34.38
M10 - 1.5	10.00	8.50	16.75	15.25	15.00	13.50	21.75	20.25	20.00	18.50	26.75	25.25	25.00	23.50	31.75	30.25	30.00	28.50	36.75	35.25
M11 - 1.5	11.00	9.50	17.75	16.25	16.50	15.00	23.25	21.75	22.00	20.50	28.75	27.25	27.50	26.00	34.25	32.75	33.00	31.50	39.75	38.25
M12 - 1.25	12.00	10.75	17.63	16.38	18.00	16.75	23.63	22.38	24.00	22.75	29.63	27.38	30.00	28.75	35.63	34.38	36.00	34.75	41.63	40.38
M12 - 1.5	12.00	10.50	18.75	17.25	18.00	16.50	24.75	23.25	24.00	22.50	30.75	29.25	30.00	28.50	36.75	32.25	36.00	34.50	42.75	41.25
M12 - 1.75	12.00	10.25	19.88	18.13	18.00	16.25	25.88	24.13	24.00	22.25	31.88	30.13	30.00	28.25	37.88	36.13	36.00	34.25	43.88	42.13
M14 - 1.5	14.00	12.50	20.75	19.25	21.00	19.50	27.75	26.25	28.00	26.50	34.75	33.25	35.00	33.50	41.75	40.25	42.00	40.50	48.75	47.25
M14 - 2	14.00	12.00	23.00	21.00	21.00	19.00	30.00	28.00	28.00	26.00	37.00	35.00	35.00	33.00	44.00	42.00	42.00	40.00	51.00	49.00
M16 - 1.5	16.00	14.50	22.75	21.25	24.00	22.50	30.75	29.25	32.00	30.50	38.75	37.25	40.00	38.50	46.75	45.25	48.00	46.50	54.75	53.25
M16 - 2	16.00	14.00	25.00	23.00	24.00	22.00	33.00	31.00	32.00	30.00	41.00	39.00	40.00	38.00	49.00	47.00	48.00	46.00	57.00	55.00
M18 - 1.5	18.00	16.50	24.75	23.25	27.00	25.50	33.75	32.25	36.00	34.50	42.75	41.25	45.00	43.50	51.75	50.25	54.00	52.50	60.75	59.25
M18 - 2	18.00	16.00	27.00	25.00	27.00	25.00	36.00	34.00	36.00	34.00	45.00	43.00	45.00	43.00	54.00	52.00	54.00	52.00	63.00	61.00
M18 - 2.5	18.00	15.50	29.25	26.75	27.00	24.50	38.25	35.75	36.00	33.50	47.25	44.75	45.00	42.50	56.25	53.75	54.00	51.50	65.25	62.75
M20 - 1.5	20.00	18.50	26.75	25.25	30.00	28.50	36.75	35.25	40.00	38.50	46.75	45.25	50.00	48.50	56.75	55.25	60.00	58.50	66.75	65.25
M20 - 2	20.00	18.00	29.00	27.00	30.00	28.00	39.00	37.00	40.00	38.00	49.00	47.00	50.00	48.00	59.00	57.00	60.00	58.00	69.00	67.00
M20 - 2.5	20.00	17.50	31.25	28.75	30.00	27.50	41.25	38.75	40.00	37.50	51.25	48.75	50.00	47.50	61.25	58.75	60.00	57.50	71.25	68.75

钢丝螺套底孔深尺寸

Thread Size	Basic Length of Insert in Terms of Nominal Diameter of Screw "D"																			
	1D				1.5D				2D				2.5D				3D			
	Q	R	S	T	Q	R	S	T	Q	R	S	T	Q	R	S	T	Q	R	S	T
Metric																				
M22 - 1.5	22.00	20.50	28.75	27.25	33.00	31.50	39.75	38.25	44.00	42.50	50.75	49.25	55.00	53.50	61.75	60.25	66.00	64.50	72.75	71.25
M22 - 2	22.00	20.00	31.00	29.00	33.00	31.00	42.00	40.00	44.00	42.00	53.00	51.00	55.00	53.00	64.00	62.00	66.00	64.00	75.00	73.00
M22 - 2.5	22.00	19.50	33.25	30.75	33.00	30.50	44.25	41.75	44.00	41.50	55.25	52.75	55.00	52.50	66.25	63.75	66.00	63.50	77.25	74.75
M24 - 2	24.00	22.00	33.00	31.00	36.00	34.00	45.00	43.00	48.00	46.00	57.00	55.00	60.00	58.00	69.00	67.00	72.00	70.00	81.00	79.00
M24 - 3	24.00	21.00	37.50	34.50	36.00	33.00	49.50	46.50	48.00	45.00	61.50	58.50	60.00	57.00	73.50	70.50	72.00	69.00	85.50	82.50
M27 - 3	27.00	24.00	40.50	37.50	40.50	37.50	54.00	51.00	54.00	51.00	67.50	64.50	67.50	64.50	81.00	78.00	81.00	78.00	94.50	91.50
M30 - 3.5	30.00	26.50	45.75	42.25	45.00	41.50	60.75	57.25	60.00	56.50	75.75	72.25	75.00	71.50	90.75	87.25	90.00	86.50	105.75	102.25
M33 - 3.5	33.00	29.50	48.75	45.25	49.50	46.00	65.25	61.75	66.00	62.50	81.75	78.25	82.50	79.00	98.25	94.75	99.00	95.50	114.75	111.25
M36 - 4	36.00	32.00	54.00	50.00	54.00	50.00	72.00	68.00	72.00	68.00	90.00	86.00	90.00	86.00	108.00	104.00	108.00	104.00	126.00	122.00
M39 - 4	39.00	35.00	57.00	53.00	58.50	54.50	76.50	72.50	78.00	74.00	96.00	92.00	97.50	93.50	115.50	111.50	117.00	113.00	135.00	131.00

备注：
 钻孔深度：最小钻孔深度“S”允许丝锥尖端和钻孔底部之间有一个螺距的切屑间隙。“S”最小允许攻丝间隙、最大安装深度和沉头孔。如果使用螺旋尖头丝锥，则应增加所示的钻孔深度，以留出切屑间隙。

R = 冲掉安装柄后，螺钉咬合部分的最大长度。
 Q = 最小全螺纹长度。
 T = 最小攻丝深度。
 S = 最小钻孔深度，不包括顶尖。



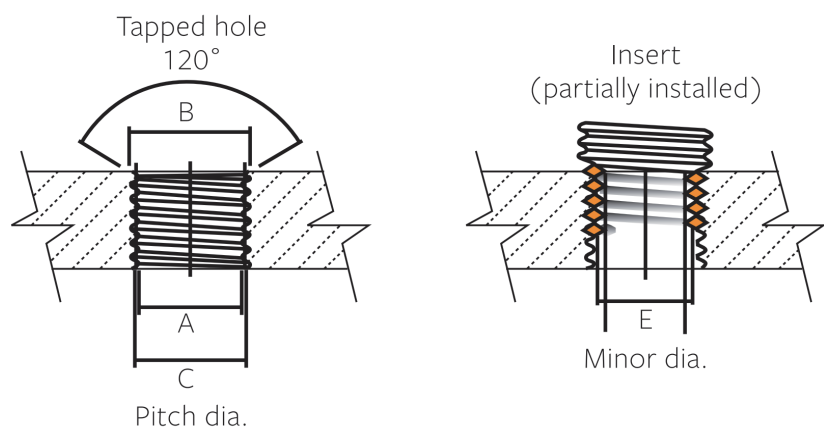
钢丝螺套安装孔径尺寸

Thread Size	Drill Size mm	Tapped Hole			Pitch Diameter				E Inserts Fitted
		A Minor Dia.		B Major Dia.	C Class 5H		C Class 6H		
		Max	Min	Min	Max	Min	Max	Min	
Metric - Drill, Tapping and Installation Depths									
M2 - 0.4	2.10	2.177	2.087	2.520	2.295	2.260	2.310	2.260	1.567
M2.2 - 0.45	2.30	2.397	2.297	2.785	2.532	2.492	2.547	2.492	1.713
M2.5 - 0.45	2.60	2.697	2.597	3.085	2.832	2.792	2.847	2.792	2.013
M3 - 0.5	3.10	3.220	3.108	3.650	3.367	3.325	3.384	3.325	2.459
M3.5 - 0.6	3.60	3.755	3.630	4.279	3.940	3.890	3.959	3.890	2.850
M4 - 0.7	4.15	4.292	4.152	4.909	4.509	4.455	4.529	4.455	3.242
M5 - 0.8	5.20	5.333	5.173	6.039	5.577	5.520	5.597	5.520	4.134
M6 - 1.0	6.20	6.406	6.216	7.299	6.719	6.650	6.742	6.650	4.917
M7 - 1.0	7.20	7.406	7.216	8.299	7.719	7.650	7.742	7.650	5.917
M8 - 1.0	8.20	8.406	8.216	9.299	8.719	8.650	8.742	8.650	6.917
M8 - 1.25	8.30	8.483	8.271	9.624	8.886	8.812	8.912	8.812	6.647
M9 - 1.25	9.30	9.483	9.271	10.624	9.886	9.812	9.912	9.812	7.647
M10 - 1.25	10.30	10.483	10.271	11.624	10.886	10.812	10.912	10.812	8.647
M10 - 1.5	10.30	10.561	10.325	11.949	11.061	10.974	11.089	10.974	8.376
M11 - 1.5	11.30	11.561	11.325	12.949	12.061	11.974	12.089	11.974	9.376
M12 - 1.25	12.30	12.483	12.271	13.624	12.898	12.812	12.926	12.812	10.647
M12 - 1.5	12.50	12.56	13.324	14.131	12.974	13.067	12.974	13.099	10.376
M12 - 1.75	12.40	12.644	12.379	14.273	13.236	13.137	13.271	13.137	10.106
M14 - 1.5	14.30	14.561	14.325	15.949	15.067	14.974	15.099	14.974	12.376
M14 - 2.0	14.40	14.733	14.433	16.598	15.406	15.299	15.444	15.299	11.835
M16 - 1.5	16.25	16.561	16.325	17.949	17.067	16.974	17.099	16.974	14.376
M16 - 2.0	16.50	16.733	16.433	18.598	17.406	17.299	17.444	17.299	13.835
M18 - 1.5	18.25	18.561	18.325	19.949	19.067	18.974	19.099	18.974	16.376
M18 - 2.0	18.50	18.733	18.433	20.598	19.406	19.299	19.444	19.299	15.835
M18 - 2.5	18.50	18.896	18.541	21.248	19.738	19.624	19.778	19.624	15.294
M20 - 1.5	20.25	20.561	20.325	21.949	21.067	20.974	21.099	20.974	18.376
M20 - 2.0	20.50	20.733	20.433	22.598	21.406	21.299	21.444	21.299	17.835
M20 - 2.5	20.50	20.896	20.541	23.248	21.738	21.624	21.778	21.624	17.294
M22 - 1.5	22.50	22.561	22.325	23.949	23.067	22.974	23.099	22.974	20.376
M22 - 2.0	22.50	22.733	22.433	24.598	23.406	23.299	23.444	23.299	19.835
M22 - 2.5	22.50	22.896	22.541	25.248	23.738	23.624	23.778	23.624	19.294
M24 - 2.0	24.25	24.733	24.433	26.598	25.414	25.299	25.454	25.299	21.835
M24 - 3.0	24.75	25.050	24.650	27.897	26.093	25.949	26.135	25.949	20.752
M27 - 3.0	27.50	28.050	27.650	30.897	29.093	28.949	29.135	28.949	23.752
M30 - 3.5	30.50	31.208	30.758	34.547	32.428	32.273	32.472	32.273	26.211
M33 - 3.5	33.50	34.208	33.758	37.547	35.428	35.273	35.472	35.273	29.211
M36 - 4.0	36.50	37.341	36.866	41.196	38.763	38.598	38.809	38.598	31.670
M39 - 4.0	39.50	40.341	39.866	44.196	41.763	41.598	41.809	41.598	34.670

钢丝螺套安装孔径尺寸

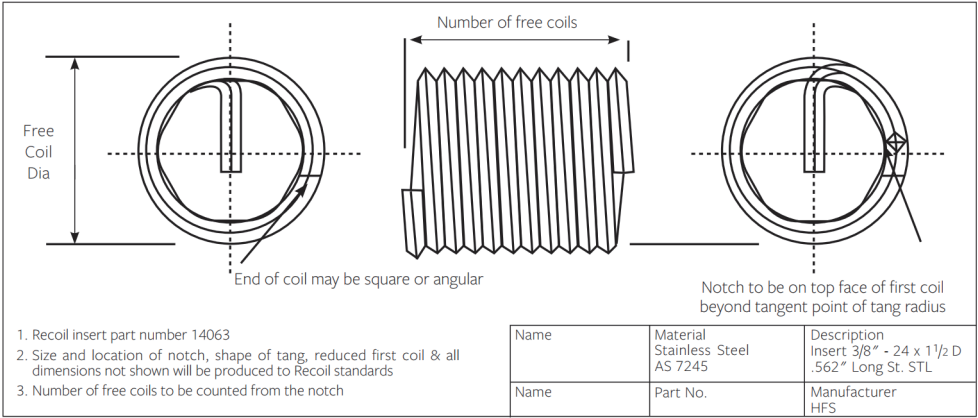
建议使用标准尺寸的钻头，尽管这些尺寸与小直径限制略有不同。钻孔尺寸为推荐尺寸，具体可以根据所选择的材料进行测试以选择合适的尺寸。

沉头孔：建议在攻丝前提供 120° 沉头孔，以防止导向螺纹接触锋利飞边。当设计没法选用沉头孔时，攻丝前应清除螺纹导向处的任何飞边或变形材料。这将有助于钢丝螺套的安装，并最大限度减少在没有沉头孔时的操作的影响。



钢丝螺套尺寸

Thread Size	1D		1.5D		2D		2.5D		3D		Free Coil Diameter		Number of Free Coils Nominal Length				
	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Min	Max	1D	1.5D	2D	2.5D	3D
Metric Coarse																	
M2 - 0.4	0.079	2.0	0.118	3.0	0.157	4.0	0.197	5.0	0.236	6.0	2.50	2.70	-	5.500	7.750	10.125	12.375
M2.2 - 0.45	0.087	2.2	0.130	3.3	0.173	4.4	0.217	5.5	0.260	6.6	2.80	3.00	3.125	5.375	7.625	9.875	12.125
M2.5 - 0.45	0.098	2.5	0.150	3.8	0.197	5.0	0.248	6.3	0.295	7.5	3.20	3.70	3.375	5.750	8.125	10.500	12.750
M3 - 0.5	0.118	3.0	0.177	4.5	0.236	6.0	0.295	7.5	0.354	9.0	3.80	4.35	3.750	6.375	8.875	11.375	13.875
M3.5 - 0.6	0.138	3.5	0.209	5.3	0.276	7.0	0.346	8.8	0.413	10.5	4.40	4.95	3.750	6.375	8.625	11.375	13.625
M4 - 0.7	0.157	4.0	0.236	6.0	0.315	8.0	0.394	10.0	0.472	12.0	5.05	5.60	3.625	6.125	8.625	11.125	13.625
M5 - 0.8	0.197	5.0	0.295	7.5	0.394	10.0	0.492	12.5	0.591	15.0	6.25	6.80	4.125	6.875	9.625	12.375	15.125
M6 - 1	0.236	6.0	0.354	9.0	0.472	12.0	0.591	15.0	0.709	18.0	7.40	7.95	4.000	6.750	9.500	12.125	14.875
M7 - 1	0.276	7.0	0.413	10.5	0.551	14.0	0.689	17.5	0.827	21.0	8.65	9.20	4.875	8.000	11.125	14.125	17.250
M8 - 0.75	0.315	8.0	0.472	12.0	0.630	16.0	0.787	20.0	0.945	24.0	9.00	9.51	8.600	13.750	18.750	-	-
M8 - 1.25	0.315	8.0	0.472	12.0	0.630	16.0	0.787	20.0	0.945	24.0	9.80	10.35	4.500	7.375	10.250	13.250	16.125
M9 - 1	0.354	9.0	0.531	13.5	0.709	18.0	0.886	22.5	1.063	27.0	10.40	10.65	7.050	11.350	15.650	19.850	24.150
M10 - 1.5	0.394	10.0	0.591	15.0	0.787	20.0	0.984	25.0	1.181	30.0	11.95	12.50	4.875	8.000	11.125	14.250	17.375
M12 - 1.75	0.472	12.0	0.709	18.0	0.945	24.0	1.181	30.0	1.417	36.0	14.30	15.00	5.000	8.250	11.500	14.625	17.875
M14 - 2	0.551	14.0	0.827	21.0	1.102	28.0	1.378	35.0	1.654	42.0	16.65	17.35	5.125	8.500	11.750	15.000	18.375
M16 - 2	0.630	16.0	0.945	24.0	1.260	32.0	1.575	40.0	1.890	48.0	18.90	19.60	6.125	9.750	13.500	17.250	21.000
M18 - 2.5	0.709	18.0	1.063	27.0	1.417	36.0	1.772	45.0	2.126	54.0	21.30	22.00	5.375	8.875	12.250	15.625	19.000
M20 - 2.5	0.787	20.0	1.181	30.0	1.575	40.0	1.969	50.0	2.362	60.0	23.55	24.40	6.125	9.875	13.625	17.375	21.125
M22 - 2.5	0.866	22.0	1.299	33.0	1.732	44.0	2.165	55.0	2.598	66.0	25.90	26.90	6.750	10.875	14.875	19.000	23.125
M24 - 3	0.945	24.0	1.417	36.0	1.890	48.0	2.362	60.0	2.835	72.0	28.00	29.00	6.125	10.000	13.750	17.500	21.375
M26 - 1.5	1.024	26.0	1.535	39.0	2.047	52.0	2.559	65.0	3.071	78.0	28.10	28.60	15.150	23.450	31.750	40.050	48.350
M27 - 3	1.063	27.0	1.594	40.5	2.126	54.0	2.657	67.5	3.189	81.0	31.40	32.40	7.000	11.250	15.500	19.750	24.000
M30 - 3	1.181	30.0	1.772	45.0	2.362	60.0	2.953	75.0	3.543	90.0	34.90	36.10	7.875	12.500	17.125	21.875	26.500
M33 - 3	1.299	33.0	1.949	49.5	2.598	66.0	3.248	82.5	3.898	99.0	38.10	39.50	8.750	13.875	19.000	24.125	29.250
M36 - 3	1.417	36.0	2.126	54.0	2.835	72.0	3.543	90.0	4.252	108.0	41.30	42.70	9.750	15.250	20.875	26.500	32.000
M39 - 3	1.535	39.0	2.303	58.5	3.071	78.0	3.839	97.5	4.606	117.0	44.40	45.80	10.750	16.750	22.750	28.875	34.875



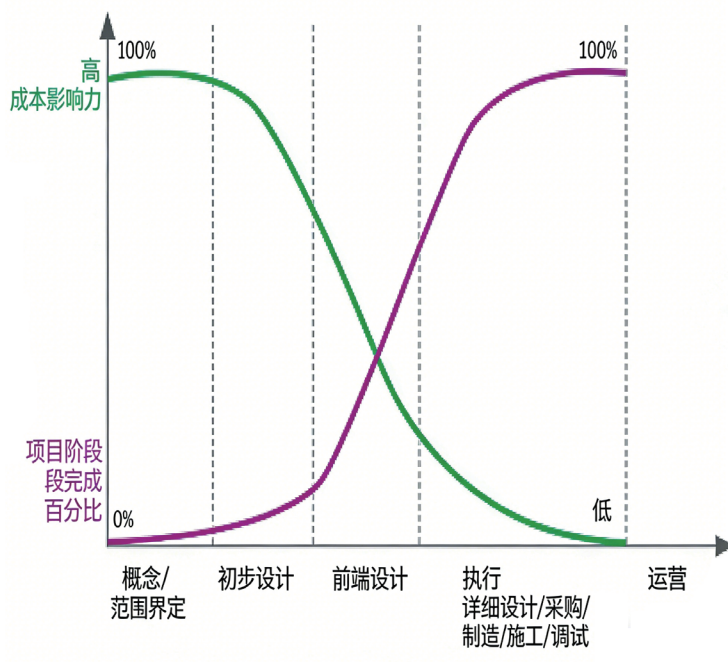
钢丝螺套尺寸

Thread Size	1D		1.5D		2D		2.5D		3D		Free Coil Diameter		Number of Free Coils Nominal Length				
	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Min	Max	1D	1.5D	2D	2.5D	3D
Metric Fine																	
M8 - 1	0.315	8.0	0.472	12.0	0.630	16.0	0.787	20.0	0.945	24.0	9.70	10.25	5.875	9.375	13.000	16.500	20.125
M9 - 1.25	0.354	9.0	0.531	13.5	0.709	18.0	0.886	22.5	1.063	27.0	10.68	10.95	9.000	13.500	18.000	22.500	27.000
M10 - 1	0.394	10.0	0.591	15.0	0.787	20.0	0.984	25.0	1.181	30.0	11.95	12.50	7.625	12.000	16.500	21.000	25.500
M10 - 1.25	0.394	10.0	0.591	15.0	0.787	20.0	0.984	25.0	1.181	30.0	12.10	12.65	5.875	9.500	13.125	16.750	20.375
M11 - 1.25	0.433	11.0	0.650	16.5	0.866	22.0	1.083	27.5	1.299	33.0	12.83	13.10	6.900	11.000	15.150	19.350	23.450
M11 - 1	0.433	11.0	0.650	16.5	0.866	22.0	1.083	27.5	1.299	33.0	12.40	12.70	8.950	14.150	19.350	24.550	29.750
M12 - 1.25	0.472	12.0	0.709	18.0	0.945	24.0	1.181	30.0	1.417	36.0	14.30	15.00	7.250	11.625	15.875	20.250	24.500
M12 - 1.5	0.472	12.0	0.709	18.0	0.945	24.0	1.181	30.0	1.417	36.0	14.25	14.95	6.000	9.625	13.375	17.000	20.750
M12 - 1	0.472	12.0	0.709	18.0	0.945	24.0	1.181	30.0	1.417	36.0	13.55	13.90	10.250	15.350	21.300	-	-
M13 - 1.5	0.512	13.0	0.768	19.5	1.023	26.0	1.279	32.5	1.535	39.0	15.20	15.60	6.650	10.750	14.950	-	-
M13 - 1.25	0.512	13.0	0.768	19.5	1.023	26.0	1.279	32.5	1.535	39.0	14.70	15.05	8.350	13.250	18.250	23.150	28.150
M14 - 1.5	0.551	14.0	0.827	21.0	1.102	28.0	1.378	35.0	1.654	42.0	16.55	17.25	7.125	11.375	15.625	20.000	24.250
M15 - 1.5	0.591	15.0	0.886	22.5	1.181	30.0	1.476	37.5	1.772	45.0	17.25	17.65	7.950	12.750	17.450	22.250	26.950
M16 - 1.5	0.63	16.0	0.945	24.0	1.260	32.0	1.575	40.0	1.890	48.0	18.90	19.60	8.250	13.125	18.000	22.750	27.625
M18 - 1.5	0.709	18.0	1.063	27.0	1.417	36.0	1.772	45.0	2.126	54.0	21.05	21.75	9.500	15.000	20.375	25.875	31.375
M18 - 2	0.709	18.0	1.063	27.0	1.417	36.0	1.772	45.0	2.126	54.0	21.15	21.85	7.000	11.125	15.375	19.500	23.625
M20 - 1.5	0.787	20.0	1.181	30.0	1.575	40.0	1.969	50.0	2.362	60.0	23.15	24.00	10.750	16.875	22.875	28.875	35.000
M20 - 2	0.787	20.0	1.181	30.0	1.575	40.0	1.969	50.0	2.362	60.0	23.20	24.05	7.875	12.500	17.250	21.875	26.500
M22 - 1.5	0.866	22.0	1.299	33.0	1.732	44.0	2.165	55.0	2.598	66.0	25.55	26.45	11.875	18.500	25.125	31.625	38.250
M22 - 2	0.787	20.0	1.181	30.0	1.575	40.0	1.969	50.0	2.362	60.0	25.60	26.50	8.750	13.750	18.875	23.875	29.000
M24 - 2	0.945	24.0	1.417	36.0	1.890	48.0	2.362	60.0	2.835	72.0	28.10	29.10	9.500	15.000	20.375	25.875	31.250
M24 - 1.5	0.945	24.0	1.417	36.0	1.890	48.0	2.362	60.0	2.835	72.0	26.10	26.60	13.850	21.550	29.150	36.850	44.450
M27 - 1.5	1.063	27.0	1.594	40.5	2.126	54.0	2.657	67.5	3.189	81.0	29.10	30.00	15.850	24.450	33.150	41.800	50.450
M27 - 2	1.063	27.0	1.594	40.5	2.126	54.0	2.657	67.5	3.189	81.0	31.30	32.30	10.875	17.000	23.250	29.375	35.500
M30 - 1.5	1.181	30.0	1.772	45.0	2.362	60.0	2.953	75.0	3.543	90.0	32.50	32.80	17.450	26.950	36.550	46.050	55.550
M30 - 2	1.181	30.0	1.772	45.0	2.362	60.0	2.953	75.0	3.543	90.0	34.50	35.70	12.250	19.125	25.875	32.750	39.500
M30 - 3.5	1.181	30.0	1.772	45.0	2.362	60.0	2.953	75.0	3.543	90.0	34.85	35.75	6.650	10.750	14.900	18.950	23.150
M33 - 2	1.299	33.0	1.949	49.5	2.598	66.0	3.248	82.5	3.898	99.0	37.80	39.20	13.625	21.125	28.625	36.000	43.500
M33 - 3.5	1.299	33.0	1.949	49.5	2.598	66.0	3.248	82.5	3.898	99.0	38.20	38.74	7.550	11.950	16.400	21.150	25.300
M36 - 1.5	1.417	36.0	2.126	54.0	2.835	72.0	3.543	90.0	4.252	108.0	38.45	38.95	22.150	33.950	45.750	57.650	69.450
M36 - 2	1.417	36.0	2.126	54.0	2.835	72.0	3.543	90.0	4.252	108.0	41.00	42.40	15.000	23.250	31.375	39.500	47.750
M36 - 4	1.417	36.0	2.126	54.0	2.835	72.0	3.543	90.0	4.252	108.0	41.90	42.90	7.000	11.350	15.750	20.050	24.350
M39 - 2	1.535	39.0	2.303	58.5	3.071	78.0	3.839	97.5	4.606	117.0	44.30	45.70	16.375	25.250	34.125	43.000	51.870
M39 - 4	1.535	39.0	2.303	58.5	3.071	78.0	3.839	97.5	4.606	117.0	45.05	46.05	7.800	12.500	17.150	21.850	23.550

行业挑战

项目周期成本影响力模型

在当今快速发展的社会中，企业研发面临的核心挑战在于：前期决策窗口极短却锁定了大部分的成本；而后期虽投入巨大纠错成本却极高，导致风险与收益严重错配。这要求企业必须在极早期就做出精准判断以应对市场的不确定性。



15 -85 定律

当今企业面临的另一个挑战在于：过度聚焦显性的采购成本，却忽视了占比85%的隐性成本。企业在设计、供应链、售后等环节往往缺乏系统统筹，导致因前期决策失误引发的高制造成本、返工、质量售后等问题，最终大幅推高了全生命周期总成本。

15%

可见成本

紧固件采购成本

85%

隐性成本

设计和筛选
—
供应商和采购
—
物流和配送
—
仓储
—
质量检测
—
预装配
—
装配
—
售后

志诚嘉六个服务

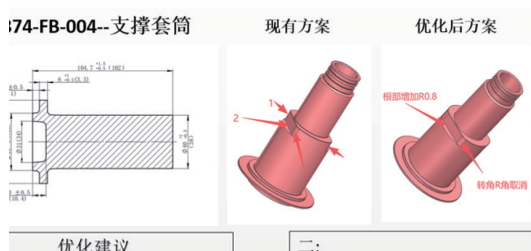
从原型设计到售后的总成本优化专家



专业设计咨询



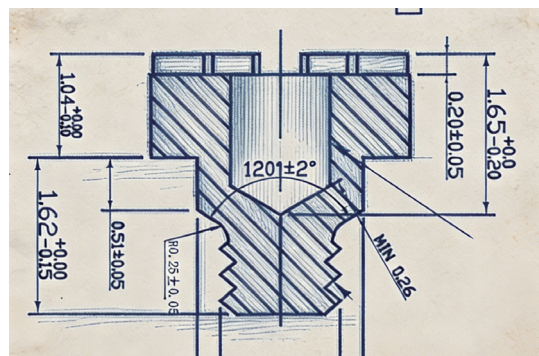
专业测试服务



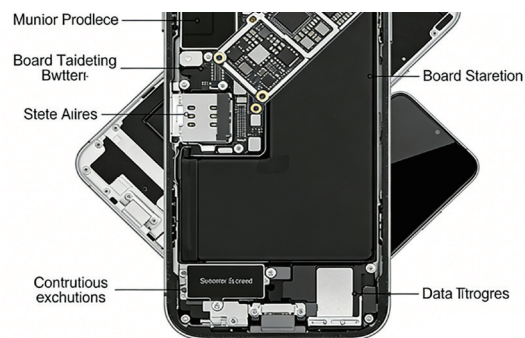
持续工艺优化



专业培训



专业设计咨询



专业拆解分析



盈锋志诚嘉精密五金（深圳）有限公司 - 总部

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