

# HELICOIL® Plus Free Running thread inserts, refill pack

Stainless steel A2 | coloured green | Metric standard thread



**Advantages:**

- High thread loading
- Increased quality and value
- Wear-resistant, low and constant thread friction
- Highly resilient
- Corrosion and temperature resistant
- Cost-effective
- Tight fit

Technical information can be found on the last page.

Diameter (d)	Article number	Pitch (P)	D <sub>HC</sub> min.	D <sub>1HC</sub>		Nominal length		W	t <sub>3</sub> max.	B	d <sub>1</sub>	
				min.	max.	t <sub>2</sub> (x d)	t <sub>2</sub>				min.	max.
M 2	41890020002	0.40	2.52	2.09	2.18	1.0	2.00	2.9	1.8	2.10	2.60	2.80
	41890020003					1.5	3.00	4.9	2.8			
	41890020004					2.0	4.00	6.9	3.8			
M 2.5	41890250005	0.45	3.08	2.60	2.70	2.0	5.00	8.1	4.8	2.60	3.80	4.00
	41890250025					1.0	2.50	3.5	2.3			
	41890250375					1.5	3.75	5.9	3.5			
M 3	41890030003	0.50	3.65	3.11	3.22	1.0	3.00	3.9	2.7	3.20	3.80	4.00
	41890030006					2.0	6.00	8.7	5.7			
	41890030045					1.5	4.50	6.3	4.2			
M 3.5	41890350007	0.60	4.28	3.63	3.76	2.0	7.00	8.7	6.7	3.70	4.42	4.60
	41890350035					1.0	3.50	3.7	3.2			
	41890350053					1.5	5.25	6.3	5.0			
M 4	41890040004	0.70	4.91	4.15	4.29	1.0	4.00	3.7	3.6	4.20	5.05	5.25
	41890040006					1.5	6.00	6.1	5.6			
	41890040008					2.0	8.00	8.4	7.6			
M 5	41890050005	0.80	6.04	5.17	5.33	1.0	5.00	4.3	4.6	5.20	6.35	6.60
	41890050010					2.0	10.00	9.7	9.6			
	41890050075					1.5	7.50	6.9	7.1			
M 6	41890060006	1.00	7.30	6.22	6.41	1.0	6.00	4.2	5.5	6.30	7.60	7.85
	41890060009					1.5	9.00	6.9	8.5			
	41890060012					2.0	12.00	9.6	11.5			
	41890060018					–	18.00	14.6	17.5			
M 7	41890070007	1.00	8.30	7.22	7.41	1.0	7.00	5.3	6.5	7.30	8.65	8.90
	41890070014					2.0	14.00	11.1	13.5			
	41890070105					1.5	10.50	8.2	10.0			
M 8	41890080008	1.25	9.62	8.27	8.48	1.0	8.00	4.7	7.4	8.40	9.85	10.10
	41890080012					1.5	12.00	7.4	11.4			
	41890080016					2.0	16.00	10.6	15.4			
M 9	41890090009	1.25	10.62	9.27	9.48	1.0	9.00	5.3	8.4	9.40	10.85	11.10
	41890090018					2.0	18.00	11.9	17.4			
	41890090135					1.5	13.50	8.6	12.9			
M 10	41890100010	1.50	11.95	10.32	10.56	1.0	10.00	5.0	9.2	10.50	12.10	12.50
	41890100015					1.5	15.00	8.1	14.2			
	41890100020					2.0	20.00	11.2	19.2			

All technical data refer to the measure mm



# HELICOIL® Plus Free Running thread inserts, refill pack

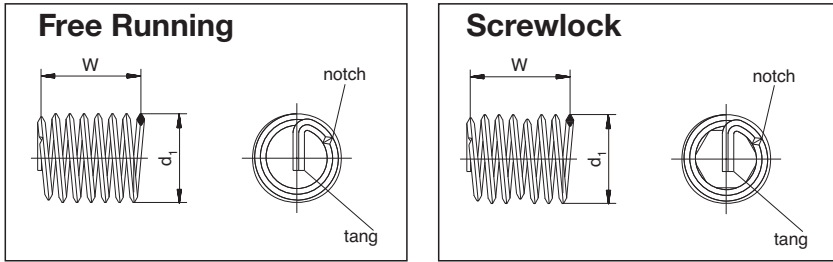
Stainless steel A2 | coloured green | Metric standard thread

Diameter (d)	Article number	Pitch (P)	D <sub>HC</sub> min.	D <sub>1HC</sub>		Nominal length		W	t <sub>3</sub> max.	B	d <sub>1</sub>	
				min.	max.	t <sub>2</sub> (x d)	t <sub>2</sub>				min.	max.
M 11	41890110011	1.50	12.95	11.33	11.56	1.0	11.00	5.6	10.2	11.50	13.10	13.50
	41890110022					2.0	22.00	12.3	21.2			
	41890110165					1.5	16.50	9.0	15.7			
M 12	41890120012	1.75	14.27	12.38	12.64	1.0	12.00	5.2	11.1	12.50	14.40	14.80
	41890120018					1.5	18.00	8.4	17.1			
	41890120024					2.0	24.00	11.7	23.1			
M 14	41890140014	2.00	16.60	14.43	14.73	1.0	14.00	5.6	13.0	14.50	16.80	17.20
	41890140021					1.5	21.00	8.8	20.0			
	41890140028					2.0	28.00	12.0	27.0			
M 16	41890160016	2.00	18.60	16.43	16.73	1.0	16.00	6.5	15.0	16.50	19.00	19.40
	41890160024					1.5	24.00	10.1	23.0			
	41890160032					2.0	32.00	13.8	31.0			
M 18	01891180018	2.50	21.25	18.54	18.90	1.0	18.00	5.6	16.7	18.75	21.50	22.00
	01891180027					1.5	27.00	9.0	25.7			
	01891180036					2.0	36.00	12.3	34.7			
	41899184001					-	9.00	2.3	7.7			
M 20	01891200020	2.50	23.25	20.54	20.90	1.0	20.00	6.3	18.7	20.75	23.70	24.20
	01891200030					1.5	30.00	10.0	28.7			
	01891200040					2.0	40.00	13.7	38.7			
M 22	01891220022	2.50	25.25	22.54	22.90	1.0	22.00	6.9	20.7	22.75	26.30	26.80
	01891220033					1.5	33.00	10.9	31.7			
	01891220044					2.0	44.00	15.0	42.7			
M 24	01891240024	3.00	27.90	24.65	25.05	1.0	24.00	6.2	22.5	24.75	28.60	29.10
	01891240036					1.5	36.00	10.0	34.5			
	01891240048					2.0	48.00	14.0	46.5			
M 27	01891270027	3.00	30.90	27.65	28.05	1.0	27.00	7.1	25.5	27.75	32.20	32.70
	01891270054					2.0	54.00	15.4	52.5			
	01891270405					1.5	40.50	11.4	39.0			
M 30	01891300030	3.50	34.55	30.76	31.21	1.0	30.00	7.0	27.2	31.00	35.20	35.70
	01891300045					1.5	45.00	11.0	43.2			
	01891300060					2.0	60.00	14.9	58.2			
M 33	01891330495	3.50	37.55	33.76	34.21	1.5	49.50	12.2	47.7	34.00	38.30	38.80

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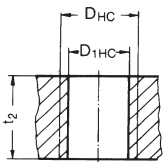


## HELICOIL® Plus thread inserts

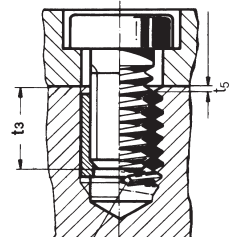
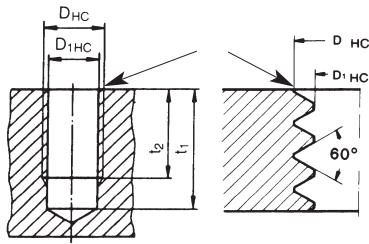
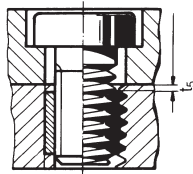


W and  $d_1$  are the control values for thread inserts (Free Running and Screwlock) before they have been installed. The length can only be measured for installed thread inserts.

### Holding thread



### Assembly



tang not broken off

Prior to tapping, counter-bore 90° and deburr.  
Outside diameter of countersink =  $D_{HC} + 0.1 \text{ mm}$ .

- d = Nominal thread diameter
- P = Thread pitch
- $d_1$  = Outside diameter of thread insert prior to installation
- W = Number of threads prior to installation
- $D_{HC}$  = Outside diameter of the parent thread
- $D_{1HC}$  = Crest diameter
- B = Suitable twist drill diameter. Please note:  $D_{1HC}$  is critical for selecting the correct twist drill diameter.
- $t_1$  = Minimum depth of tapped hole according to DIN 76 – Part 1 (guide value)
- $t_2$  = The nominal length of the thread insert corresponds to the minimum length of the full parent thread for blind holes or the minimum plate thickness for a through hole.
- $t_3$  = Maximum screw-in depth when the tang is not removed
- $t_5$  = Distance of the thread insert from the joint face = 0.25 to 0.5 P, if  $t_2$  corresponds to the above-mentioned minimum value

When you use HELICOIL® Plus thread inserts for volume production, we recommend to add at least  $1 \times P$  to values  $t_1$  and  $t_2$ .

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