

# HELICOIL® Plus Kit - Thread repair

M18 - M36 x 1,5 | 1 dimension in 1 length

## Delivery scope:

- 10 HELICOIL® Plus thread inserts of the same size and length
- HELICOIL® manual tap (single tap or two-parts set consisting of pre and final cutter)
- HELICOIL® Plus installation mandrel (M18–M24 normal screw thread)
- HELICOIL® Plus manual installation tool (M27–M33 normal screw thread, M18 x 1.5–M36 x 1.5 fine screw thread)
- Practical case for storage and transport
- Operating instructions



Technical information can be found on the last page.

| Diameter<br>(d) | Article number | Pitch<br>(P) | D <sub>HC</sub><br>min. | D <sub>1HC</sub> |       | Nominal length       |                | W    | t <sub>3</sub><br>max. | B     | d <sub>1</sub> |      |
|-----------------|----------------|--------------|-------------------------|------------------|-------|----------------------|----------------|------|------------------------|-------|----------------|------|
|                 |                |              |                         | min.             | max.  | t <sub>2</sub> (x d) | t <sub>2</sub> |      |                        |       | min.           | max. |
| M 18            | 41851180018    | 2.5          | 21.25                   | 18.54            | 18.90 | 1.0                  | 18.0           | 5.6  | 16.7                   | 18.75 | 21.5           | 22.0 |
|                 | 41851180027    |              |                         |                  |       | 1.5                  | 27.0           | 9.0  | 25.7                   |       |                |      |
|                 | 41851180036    |              |                         |                  |       | 2.0                  | 36.0           | 12.3 | 34.7                   |       |                |      |
| M 18x1.5        | 41851184018    | 1.5          | 19.95                   | 18.32            | 18.56 | 1.0                  | 18.0           | 9.5  | 17.2                   | 18.50 | 21.5           | 22.0 |
|                 | 41851184027    |              |                         |                  |       | 1.5                  | 27.0           | 14.9 | 26.2                   |       |                |      |
|                 | 41851184036    |              |                         |                  |       | 2.0                  | 36.0           | 20.2 | 35.2                   |       |                |      |
| M 18x2          | 41851185027    | 2.0          | 20.60                   | 18.43            | 18.72 | 1.5                  | 27.0           | 11.2 | 26.0                   | 18.50 | 21.5           | 22.0 |
| M 20            | 41851200020    | 2.5          | 23.25                   | 20.54            | 20.90 | 1.0                  | 20.0           | 6.3  | 19.2                   | 20.75 | 23.7           | 24.2 |
|                 | 41851200030    |              |                         |                  |       | 1.5                  | 30.0           | 10.0 | 29.2                   |       |                |      |
|                 | 41851200040    |              |                         |                  |       | 2.0                  | 40.0           | 13.7 | 39.2                   |       |                |      |
| M 20x1.5        | 41851204020    | 1.5          | 21.95                   | 20.32            | 20.56 | 1.0                  | 20.0           | 10.7 | 19.2                   | 20.50 | 23.7           | 24.2 |
|                 | 41851204030    |              |                         |                  |       | 1.5                  | 30.0           | 16.7 | 29.2                   |       |                |      |
|                 | 41851204040    |              |                         |                  |       | 2.0                  | 40.0           | 22.4 | 39.2                   |       |                |      |
| M 20x2          | 41851205020    | 2.0          | 22.60                   | 20.43            | 20.73 | 1.0                  | 20.0           | 8.0  | 19.0                   | 20.50 | 23.7           | 24.2 |
|                 | 41851205030    |              |                         |                  |       | 1.5                  | 30.0           | 12.5 | 29.0                   |       |                |      |
|                 | 41851205040    |              |                         |                  |       | 2.0                  | 40.0           | 16.8 | 39.0                   |       |                |      |
| M 22            | 41851220022    | 2.5          | 25.25                   | 22.54            | 22.90 | 1.0                  | 22.0           | 6.9  | 20.7                   | 22.75 | 26.3           | 26.8 |
|                 | 41851220033    |              |                         |                  |       | 1.5                  | 33.0           | 10.9 | 31.7                   |       |                |      |
|                 | 41851220044    |              |                         |                  |       | 2.0                  | 44.0           | 15.0 | 42.7                   |       |                |      |
| M 22x1.5        | 41851224022    | 1.5          | 23.95                   | 22.32            | 22.56 | 1.0                  | 22.0           | 11.7 | 21.2                   | 22.50 | 26.3           | 26.8 |
|                 | 41851224033    |              |                         |                  |       | 1.5                  | 33.0           | 18.1 | 32.2                   |       |                |      |
|                 | 41851224044    |              |                         |                  |       | 2.0                  | 44.0           | 24.5 | 43.2                   |       |                |      |
| M 22x2          | 41851225033    | 2.0          | 24.60                   | 22.43            | 22.73 | 1.5                  | 33.0           | 13.6 | 32.0                   | 22.50 | 26.3           | 26.8 |
|                 | 41851225044    |              |                         |                  |       | 2.0                  | 44.0           | 18.4 | 43.0                   |       |                |      |
| M 24            | 41851240024    | 3.0          | 27.90                   | 24.65            | 25.05 | 1.0                  | 24.0           | 6.2  | 22.5                   | 24.75 | 28.6           | 29.1 |
|                 | 41851240036    |              |                         |                  |       | 1.5                  | 36.0           | 10.0 | 34.5                   |       |                |      |
|                 | 41851240048    |              |                         |                  |       | 2.0                  | 48.0           | 14.0 | 46.5                   |       |                |      |
| M 24x1.5        | 41851244024    | 1.5          | 25.95                   | 24.33            | 24.56 | 1.0                  | 24.0           | 12.9 | 23.2                   | 24.50 | 28.6           | 29.1 |
|                 | 41851244036    |              |                         |                  |       | 1.5                  | 36.0           | 19.8 | 35.2                   |       |                |      |
|                 | 41851244048    |              |                         |                  |       | 2.0                  | 48.0           | 26.7 | 47.2                   |       |                |      |
| M 24x2          | 41851245024    | 2.0          | 26.60                   | 24.43            | 24.73 | 1.0                  | 24.0           | 9.6  | 23.0                   | 24.50 | 28.6           | 29.1 |
|                 | 41851245036    |              |                         |                  |       | 1.5                  | 36.0           | 15.0 | 35.0                   |       |                |      |
|                 | 41851245048    |              |                         |                  |       | 2.0                  | 48.0           | 20.2 | 47.0                   |       |                |      |
| M 26x1.5        | 41851264026    | 1.5          | 27.95                   | 26.33            | 26.56 | 1.0                  | 26.0           | 14.0 | 25.2                   | 26.50 | 31.0           | 31.5 |
|                 | 41851264039    |              |                         |                  |       | 1.5                  | 39.0           | 21.6 | 38.2                   |       |                |      |
|                 | 41851264052    |              |                         |                  |       | 2.0                  | 52.0           | 29.1 | 51.2                   |       |                |      |

All technical data refer to the measure mm



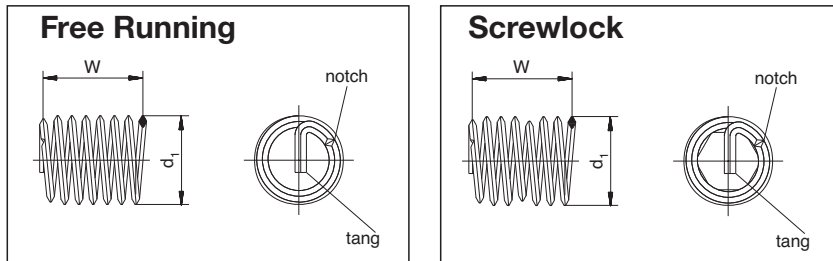
**HELICOIL® Plus Kit - Thread repair**  
M18 - M36 x 1,5 | 1 dimension in 1 length

| Diameter<br>(d) | Article number | Pitch<br>(P) | D <sub>HC</sub><br>min. | D <sub>1HC</sub><br>min.    max. |       | Nominal length<br>t <sub>2</sub> (x d) | Nominal length<br>t <sub>2</sub> | W    | t <sub>3</sub><br>max. | B     | d <sub>1</sub><br>min.    max. |      |
|-----------------|----------------|--------------|-------------------------|----------------------------------|-------|----------------------------------------|----------------------------------|------|------------------------|-------|--------------------------------|------|
| M 27            | 41851270027    | 3.0          | 30.90                   | 27.65                            | 28.05 | 1.0                                    | 27.0                             | 7.1  | 25.5                   | 27.75 | 32.2                           | 32.7 |
|                 | 41851270054    |              |                         |                                  |       | 2.0                                    | 54.0                             | 15.4 | 52.5                   |       |                                |      |
|                 | 41851270405    |              |                         |                                  |       | 1.5                                    | 40.5                             | 11.4 | 39.0                   |       |                                |      |
| M 27x1.5        | 41851274027    | 1.5          | 28.95                   | 27.33                            | 27.56 | 1.0                                    | 27.0                             | 14.6 | 26.2                   | 27.50 | 32.2                           | 32.7 |
|                 | 41851274405    |              |                         |                                  |       | 1.5                                    | 40.5                             | 22.6 | 39.7                   |       |                                |      |
|                 | 41851275027    |              |                         |                                  |       | 1.0                                    | 27.0                             | 10.8 | 26.0                   |       |                                |      |
| M 27x2          | 41851275054    | 2.0          | 29.60                   | 27.43                            | 27.73 | 2.0                                    | 54.0                             | 22.6 | 53.0                   | 27.50 | 32.2                           | 32.7 |
|                 | 41851275405    |              |                         |                                  |       | 1.5                                    | 40.5                             | 16.8 | 39.5                   |       |                                |      |
|                 | 41851284028    |              |                         |                                  |       | 1.0                                    | 28.0                             | 15.2 | 27.2                   |       |                                |      |
| M 28x1.5        | 41851300030    | 1.5          | 29.95                   | 28.33                            | 28.56 | 1.0                                    | 30.0                             | 7.0  | 28.2                   | 28.50 | 33.1                           | 33.6 |
| M 30            | 41851300045    | 3.5          | 34.55                   | 30.76                            | 31.21 | 1.5                                    | 45.0                             | 11.0 | 43.2                   | 31.00 | 35.2                           | 35.7 |
|                 | 41851300060    |              |                         |                                  |       | 2.0                                    | 60.0                             | 14.9 | 58.2                   |       |                                |      |
|                 | 41851304030    |              |                         |                                  |       | 1.0                                    | 30.0                             | 16.5 | 29.2                   |       |                                |      |
| M 30x1.5        | 41851304045    | 1.5          | 31.95                   | 30.33                            | 30.56 | 1.5                                    | 45.0                             | 25.3 | 44.2                   | 30.50 | 35.2                           | 35.7 |
|                 | 41851305030    |              |                         |                                  |       | 1.0                                    | 30.0                             | 12.3 | 29.0                   |       |                                |      |
|                 | 41851305045    |              |                         |                                  |       | 1.5                                    | 45.0                             | 19.0 | 44.0                   |       |                                |      |
| M 30x2          | 41851305060    | 2.0          | 32.60                   | 30.43                            | 30.73 | 2.0                                    | 60.0                             | 25.5 | 59.0                   | 30.50 | 35.2                           | 35.7 |
|                 | 41851324032    |              |                         |                                  |       | 1.5                                    | –                                | –    | –                      |       |                                |      |
|                 | 41851324032    |              |                         |                                  |       | 1.0                                    | 32.0                             | –    | –                      |       |                                |      |
| M 32x1.5        | 41851330033    | 3.5          | 37.55                   | 33.76                            | 34.21 | 1.0                                    | 33.0                             | 7.8  | 31.2                   | 34.00 | 38.3                           | 38.8 |
|                 | 41851330066    |              |                         |                                  |       | 2.0                                    | 66.0                             | 16.5 | 64.2                   |       |                                |      |
|                 | 41851330495    |              |                         |                                  |       | 1.5                                    | 49.5                             | 12.2 | 47.7                   |       |                                |      |
| M 33x2          | 41851335033    | 2.0          | 35.60                   | 33.43                            | 33.73 | 1.0                                    | 33.0                             | 13.7 | 32.0                   | 33.50 | 38.3                           | 38.8 |
|                 | 41851335495    |              |                         |                                  |       | 1.5                                    | 49.5                             | 21.2 | 48.5                   |       |                                |      |
|                 | 41851354035    |              |                         |                                  |       | 1.0                                    | 35.0                             | –    | –                      |       |                                |      |
| M 35x1.5        | 41851364036    | 1.5          | 37.95                   | 36.33                            | 36.56 | 1.0                                    | 36.0                             | 19.9 | 35.2                   | 36.50 | 42.1                           | 42.6 |

All technical data refer to the measure mm

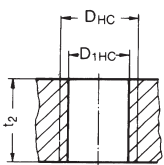


## HELICOIL® Plus thread inserts

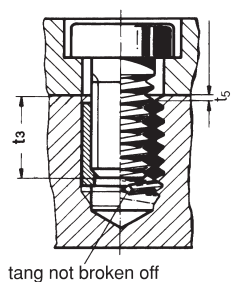
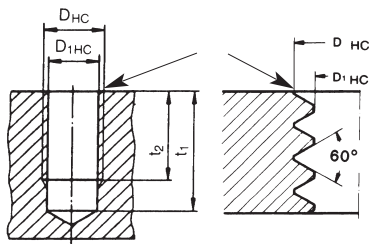
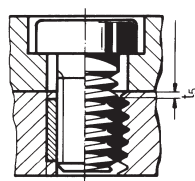


W and  $d_1$  are the control values for thread inserts (Free Running and Screwlock) before they have been installed. The length can only be measured for installed thread inserts.

### Holding thread



### Assembly



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

- |                                                                                                                       |                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| d = Nominal thread diameter                                                                                           | $t_1$ = Minimum depth of tapped hole according to DIN 76 – Part 1 (guide value)                                                                                                |
| P = Thread pitch                                                                                                      | $t_2$ = 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. |
| $d_1$ = Outside diameter of thread insert prior to installation                                                       | $t_3$ = Maximum screw-in depth when the tang is not removed                                                                                                                    |
| W = Number of threads prior to installation                                                                           | $t_5$ = 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                                           |
| $D_{HC}$ = 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. |                                                                                                                                                                                |

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