



ETP 46

(EXTERNAL TECHNICAL PAPER NUMBER 46)

TAPPEX DEDSERT™ FOR ULTRASONIC OR HEAT INSTALLATION INTO THERMOPLASTICS

Tappex is extending its family of inserts by introducing the Dedsert range.

The design, illustrated below, includes two bands of helical knurling with left and right helix, undercuts and a pilot to assist with insert location.

Particularly suitable where high load capacity is required, the two bands of opposed helical knurling offer a good combination of rotational and pull out performance.

The Dedsert is available unheaded, headed and double ended and may be manufactured with a male thread.





Advantages

- High rotational and pull out performance.
- Rapid heat or ultrasonic installation.
- Short and other variants available on request.
- Pilot provides a means of alignment with the receiving hole.

Dedsert Range

The Part Number is defined 101 for unheaded regular length, 102 unheaded short length, 171 for reduced headed regular length and 172 for reduced headed short length, followed by the thread size.

Current and some planned availability and key dimensions:

| Part Number | Avble | Thread Size | Length | Dia. over knurl | Head Dia. | Head Depth | Hole Diameter | Min. Boss Diameter |
|-------------|-------|-------------|--------|-----------------|-----------|------------|---------------|--------------------|
| 101M2.5 | No | M2.5 | 5.8 | 4.6 | - | - | 4.0 – 4.1 | 8.6 |
| 101M3 | Yes | M3 | 5.8 | 4.6 | - | - | 4.0 – 4.1 | 8.6 |
| 1014-40C | No | 4-40C | 5.8 | 4.6 | - | - | 4.0 – 4.1 | 8.6 |
| 101M4 | Yes | M4 | 8.2 | 6.3 | - | - | 5.6 – 5.7 | 10.6 |
| 1018-32C | No | 8-32C | 8.2 | 6.3 | - | - | 5.6 – 5.7 | 10.6 |
| 101M5 | Yes | M5 | 9.5 | 7.0 | - | - | 6.4 – 6.5 | 11.8 |
| 102M8 | Yes | M8 | 8.5 | 10.3 | - | - | 9.6 – 9.7 | 16.6 |
| 172M5 | Yes | M5 | 6.7 | 7.0 | 7.9 | 1.0 | 6.4 – 6.5 | 11.8 |
| 172M6 | Yes | M6 | 8.9 | 8.6 | 9.5 | 1.3 | 8.0 – 8.1 | 14.0 |
| 401M6 | Yes | M6 | 12.7 | 8.6 | - | - | 8.0 – 8.1 | 14.0 |
| 401250C | Yes | ¼" UNC | 12.7 | 8.6 | - | - | 8.0 – 8.1 | 14.0 |
| 401M6-XPBV | Yes | M6 | 12.7 | 8.6 | - | - | 8.0 – 8.1 | 14.0 |

The hole and Min. boss diameter are for guidance only and will depend on the particular grade of material. To determine the optimum dimension, testing is recommended.

A small counter-bore is recommended at a diameter 0.1mm larger than the knurl. This is to provide a good finish at the moulding surface.

The Tappex Heat Inserter is recommended for controlled heat installation of the Dedsert.

(Note: ...XPBV denotes a variant made from lead free brass that is vision sorted)