

**TAPPEX THREAD INSERTS LIMITED**

Masons Road  
Stratford-upon-Avon  
Warwickshire  
CV37 9NT

Telephone: +44(0) 1789 206 600  
Email: sales@tappex.co.uk

Fax: +44(0) 1789 414 194

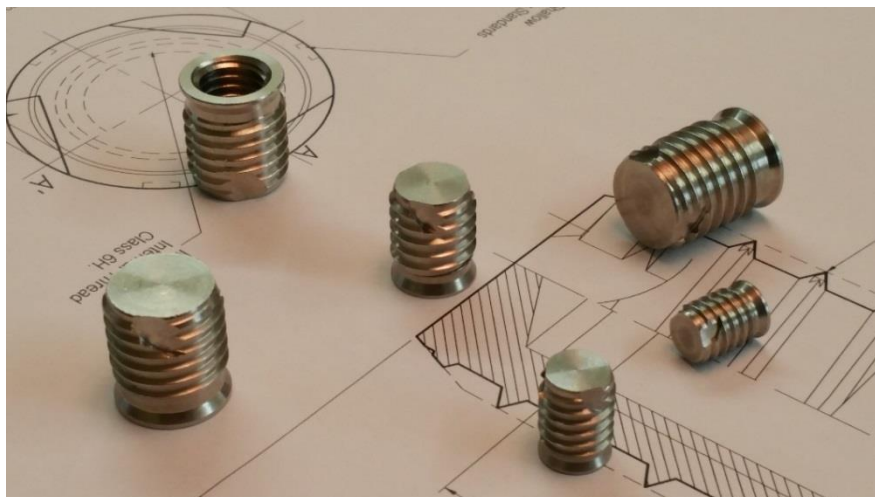
## **ETP 60**

(EXTERNAL TECHNICAL PAPER NUMBER 60)

### **TAPPEX BLIND TRISERT-3®**

In-line with our philosophy of continuous product development, Tappex has extended the proven Trisert-3 range to now include a series of blind-ended inserts. These inserts are suitable for being both moulded-in and post-installed via the self-tapping process.

When moulded into most good quality grades of thermoplastic materials, with the insert fully supported by a suitable mating part, we would expect a long-series blind-ended Trisert-3 to be able to exceed the maximum recommended torque for an 8.8 grade bolt or screw in application mode. (This assumes a coefficient of friction of 0.14 under the head of the bolt or screw, and the same within the joint of the threads. It also assumes that there is at least 1D of bolt engagement in the insert.)



The reduced head of the Trisert-3 provides a clean and neat bearing surface for the mating part; where visible this also has aesthetic advantages.

Moulding the blind-ended Trisert-3 inserts into an injection moulded component, they will need to be secured within the mould tool using threaded carrier pins.



The external form is free of loose particulates that are often associated with diamond knurled inserts, especially after long distance transportation.

Being suitable for both moulding in and post-installing means that the blind Trisert-3 insert can be used for the early prototype stages of the project through to production without a change of insert being required.

The part number is defined as per the existing Trisert-3 range, with long 6270 lengths as standard, followed by the thread size and the letter 'B'. Where applicable, the insert still carries the suffix (303, 316, Ti5 etc.) for material designation.

The Tappex hand installation tools with a 'BL' suffix should be used when post installing the blind version of the Trisert-3. These hand tools have a shorter male thread length to ensure contact between the head of the insert and the nose of the tool during installation.

Specials, Imperial threads, Headed and Titanium variants would be considered; please contact our Engineering Department with your requirements and application details.

Current availability and key dimensions:

Part Number	Available	Min. Bolt engagement length (mm)	Internal Thread Size	Length (mm)	Outside dia. (mm)	Hole dia. (mm)	Min. boss dia. (mm)
<b>6270M3B-303</b>	Yes	4.0	M3	6.25	4.73	4.1 - 4.55	7.7
<b>6270M3B-316</b>	To order	4.0	M3	6.25	4.73	4.1 - 4.55	7.7
<b>6270M4B-303</b>	Yes	5.5	M4	8.4	6.31	5.8 - 6.15	10.7
<b>6270M4B-316</b>	To order	5.5	M4	8.4	6.31	5.8 - 6.15	10.7
<b>6270M5B-303</b>	Yes	6.9	M5	10.0	7.5	6.9 - 7.35	12.6
<b>6270M5B-316</b>	To order	6.9	M5	10.0	7.5	6.9 - 7.35	12.6
<b>6270M6B-303</b>	Yes	8.0	M6	12.0	8.69	8.0 - 8.55	14.7
<b>6270M6B-316</b>	To order	8.0	M6	12.0	8.69	8.0 - 8.55	14.7
<b>6270M8B-303</b>	Yes	8.9	M8	14.0	11.06	10.1 - 10.85	18.6
<b>6270M8B-316</b>	To order	8.9	M8	14.0	11.06	10.1 - 10.85	18.6
<b>6238M10B-303</b>	Yes	8.3	M10	16.0	13.95	13.0 - 13.5	23.7
<b>6238M10B-316</b>	Yes	8.3	M10	16.0	13.95	13.0 - 13.5	23.7
<b>6270M10B-303</b>	Yes	10.3	M10	18.0	13.95	13.0 - 13.5	23.7
<b>6270M10B-316</b>	Yes	10.3	M10	18.0	13.95	13.0 - 13.5	23.7



When post-installing the Trisert-3 blind ended inserts, users will have no concerns with swarf or chips getting into the internal thread of the insert. All the advantages of the existing Trisert-3 range are retained and are detailed below:

- three facets offering balanced cutting
- enhanced back-out performance
- large bearing surface – the reduced head also aids orientation of the insert
- speed of installation
- free running internal thread
- compatibility with the existing Trisert / Trisert-3 hole sizes
- reduced external diameter
- fully-supported cutting edges.

The hole and minimum boss diameters are for guidance only and will depend on the particular grade of parent material into which the inserts are being installed. To determine the optimum dimensions for your application, please contact our Engineering Department - testing is always recommended.

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**Technical Department.**