



Insert Shape

| Symbol | Insert Shape | Angle | Symbol | Insert Shape | Angle |
|--------|--------------|-------|--------|--------------|-------|
| C      |              | 80°   | A      |              | 85°   |
| D      |              | 55°   | B      |              | 82°   |
| E      |              | 75°   | K      |              | 55°   |
| F      |              | 50°   | H      |              | 120°  |
| V      |              | 35°   | O      |              | 135°  |
| R      |              | -     | P      |              | 108°  |
| S      |              | 90°   | L      |              | 90°   |
| T      |              | 60°   | M      |              | 86°   |
| W      |              | 80°   |        |              |       |

Clearance angle

| Symbol | Relief Angle | Symbol | Relief Angle                                    |
|--------|--------------|--------|---|
| A      | 3°           | G      | 30°   |
| B      | 5°           | N      | 0°  |
| C      | 7°           | P*     | 11°   |
| D      | 15°          | O      | Other clearance angle with specific description |
| E      | 20°          |        |   |
| F      | 25°          |        |   |

Insert type

| Symbol | Shape | Symbol | Shape        |
|--------|-------|--------|--------------|
| A      |       | W      |              |
| G      |       | T      |              |
| M      |       |        |              |
| N      |       |        |              |
| R      |       | X      | Non Standard |

Thickness

| Symbol | Thickness (mm) |
|--------|----------------|
| 02     | S = 2,38       |
| 03     | S = 3,18       |
| T3     | S = 3,97       |
| 04     | S = 4,76       |
| 05     | S = 5,56       |
| 06     | S = 6,35       |
| 07     | S = 7,94       |
| 09     | S = 9,52       |

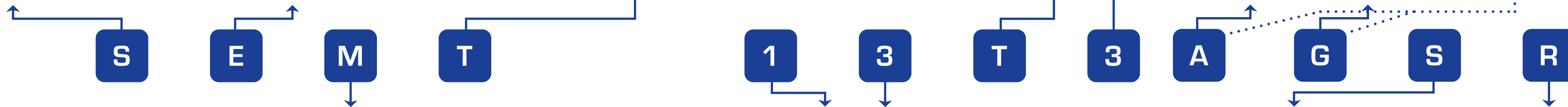
Corner geometry with wiper flat

| Entering angle        | Clearance angle on wiper flat |
|-----------------------|-------------------------------|
| A 45°                 | A 3°                          |
| D 60°                 | B 5°                          |
| E 75°                 | C 7°                          |
| F 85°                 | D 15°                         |
| P 90°                 | E 20°                         |
| Z - Others            | F 25°                         |
| 1. Major cutting edge | G 30°                         |
| 2. Chamfered corner   | N 0°                          |
| 3. Wiper flat         | P 11°                         |
| 4. Side cutting edge  | Z - Others                    |

Radius

| Symbol | Radius (mm) |
|--------|-------------|
| 02     | r = 0,2 mm  |
| 04     | r = 0,4 mm  |
| 08     | r = 0,8 mm  |
| 12     | r = 1,2 mm  |
| 16     | r = 1,6 mm  |
| 20     | r = 2,0 mm  |
| 24     | r = 2,4 mm  |

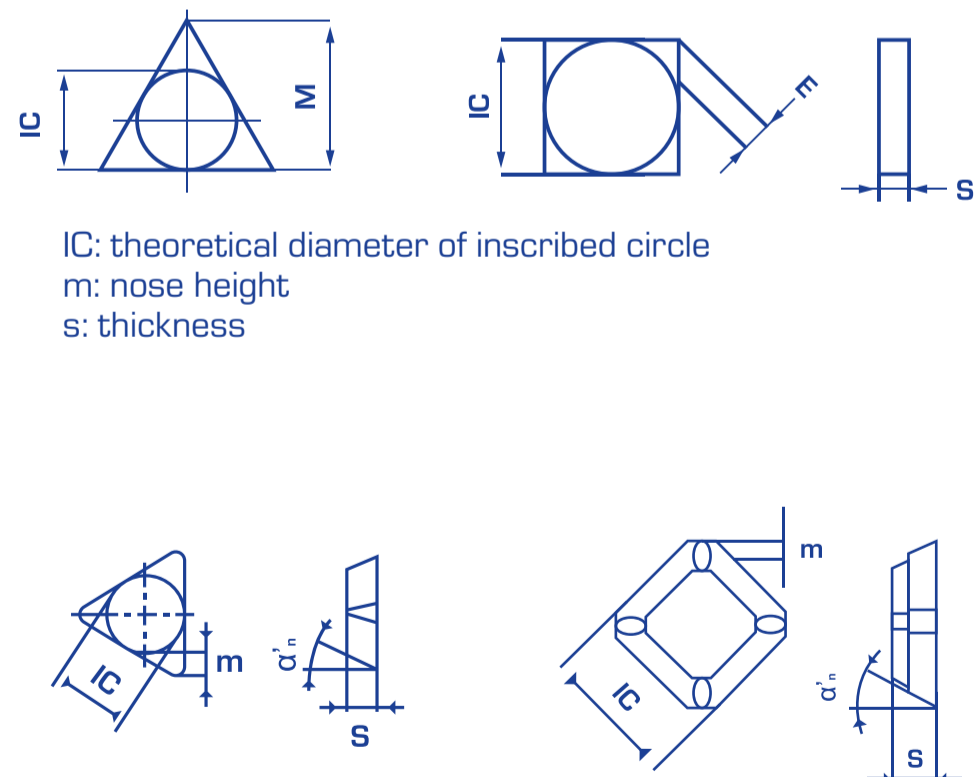
MO - Round insert (metric)  
OO - Round insert (inch)



Tolerances

| Symbol | Tolerances (mm) |                |         |
|--------|-----------------|----------------|---------|
|        | m               | IC             | s       |
| A      | ± 0.005         | ± 0.025        | ± 0.025 |
| F      | ± 0.005         | ± 0.013        | ± 0.025 |
| C      | ± 0.013         | ± 0.025        | ± 0.025 |
| H      | ± 0.013         | ± 0.013        | ± 0.025 |
| E      | ± 0.025         | ± 0.025        | ± 0.025 |
| G      | ± 0.025         | ± 0.025        | ± 0,13  |
| J      | ± 0.005         | ±0,05 - ±0,13* | ± 0.025 |
| K      | ± 0.013         | ±0,05 - ±0,13* | ± 0.025 |
| L      | ± 0.025         | ±0,05 - ±0,13* | ± 0.025 |
| M      | ±0,08 ~ ±0,18*  | ±0,05 - ±0,13* | ± 0,13  |
| N      | ±0,08 ~ ±0,18*  | ±0,05 - ±0,13* | ± 0,025 |
| U      | ±0,13 ~ ±0,38*  | ±0,08 - ±0,25* | ± 0,13  |

\* The tolerance is dependent upon the insert size of IC. See tables below.



Tolerance of Nose Height (m-Class)

| Symbol | Tolerance (mm) |
|--------|----------------|
| M      | ±0,08          |
| S      | ±0,08          |
| T      | ±0,13          |
| C      | ±0,15          |
| W      | ±0,15          |
| V      | ±0,18          |
| D      | ±0,18          |

Tolerance class for dimension IC

| IC     | S     | T | C | D | V | W | R     |
|--------|-------|---|---|---|---|---|-------|
| 6,35   | ±0,05 |   |   |   |   |   |       |
| 9,525  | ±0,05 |   |   |   |   |   | ±0,05 |
| 12,7   | ±0,08 |   |   |   |   |   | ±0,08 |
| 15,875 | ±0,10 |   |   |   |   |   | ±0,10 |
| 19,05  | ±0,10 |   |   |   |   |   | ±0,10 |
| 25,4   | ±0,13 |   |   |   |   |   | ±0,13 |

Insert size

Symbol and cutting edge length (mm)

| IC d (mm) | Insert Type |           |             |             |           |           |           |
|-----------|-------------|-----------|-------------|-------------|-----------|-----------|-----------|
|           | C           | D         | R           | S           | T         | V         | W         |
| 3,97      |             |           |             |             | 06 (6,9)  |           |           |
| 4,76      |             |           |             |             | 08 (8,2)  |           |           |
| 5,0       |             |           | 05 (5,0)    |             |           |           |           |
| 5,56      |             |           |             |             | 09 (9,6)  | 09 (9,7)  | 03 (3,8)  |
| 6,0       |             |           | 06 (6,0)    |             |           |           |           |
| 6,35      | 06 (6,4)    | 07 (7,7)  |             | 06 (6,35)   | 11 (11,0) | 11 (11,1) | 04 (4,3)  |
| 7,94      | 08 (8,0)    |           |             | 07 (7,94)   |           |           | 05 (5,4)  |
| 8,0       |             |           | 08 (8,0)    |             |           |           |           |
| 9,525     | 09 (9,7)    | 11 (11,6) | 09 (9,525)  | 09 (9,525)  | 16 (16,5) | 16 (16,6) | 06 (6,5)  |
| 10        |             |           | 11 (10,0)   |             |           |           |           |
| 12        |             |           | 12 (12,0)   |             |           |           |           |
| 12,7      | 12 (12,0)   | 15 (15,0) | 12 (12,7)   | 12 (12,7)   | 22 (22,0) |           | 08 (8,7)  |
| 15,875    | 16 (16,1)   | 19 (19,4) | 15 (15,875) | 15 (15,875) | 27 (27,5) |           | 10 (10,9) |
| 16        |             |           | 16 (16,0)   |             |           |           |           |
| 19,05     | 19 (19,3)   |           | 19 (19,05)  | 19 (19,05)  | 33 (33,0) |           |           |
| 20        |             |           | 20 (20,0)   |             |           |           |           |
| 25        |             |           | 25 (25,0)   |             |           |           |           |
| 25,4      |             |           | 25 (25,4)   | 25 (25,4)   |           |           |           |
| 31,75     |             |           | 31 (31,75)  | 31 (31,75)  |           |           |           |
| 32        |             |           | 32 (32,0)   |             |           |           |           |

Cutting edge condition

| Symbol | Shape                 |
|--------|-----------------------|
| F      | Sharp                 |
| E      | Rounded               |
| T      | Chamfered             |
| S      | Rounded and chamfered |

Feed direction

