

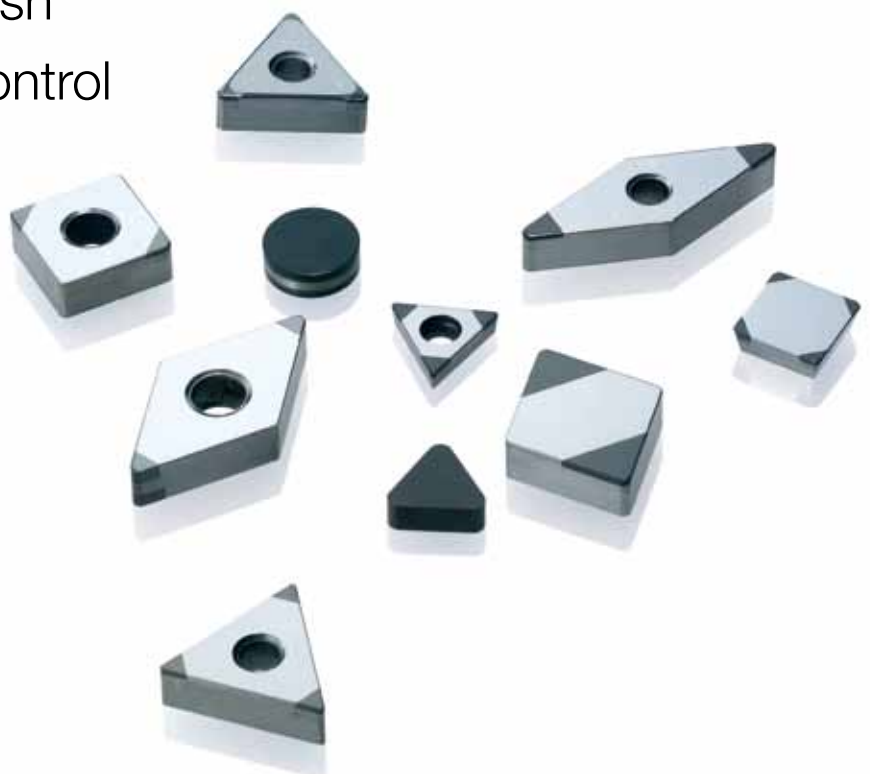
Turning





EHWA offers a wide range of PCD & PCBN inserts for turning. Customers looking for high productivity can count on EHWA's turning tools. Here is the right choice for an excellent and economical solution.

- Maximum metal removal & higher productivity
- Stronger wear resistance & longer tool life
- Superior surface finish
- Precise tolerance control

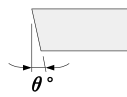


Designation system | unit: metric

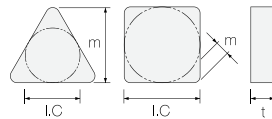
C N M G

Insert shape Clearance angle Tolerances Clamp type

| Symbol | Shape |
|--------|-------|
| C | |
| D | |
| E | |
| K | |
| R | |
| S | |
| T | |
| V | |
| W | |



| Symbol | Angle |
|--------|-------|
| N | 0° |
| A | 3° |
| B | 5° |
| C | 7° |
| P | 11° |
| D | 15° |
| E | 20° |
| F | 25° |



| Class | I.C size (mm) | Tolerance | | |
|-------|---------------|-----------|--------|----------|
| | | m (mm) | t (mm) | I.C (mm) |
| A | 6.35 | ±0.005 | ±0.025 | ±0.025 |
| F | 9.525 | ±0.005 | ±0.025 | ±0.013 |
| C | 12.7 | ±0.013 | ±0.025 | ±0.025 |
| | 15.875 | | | |
| H | 19.05 | ±0.013 | ±0.025 | ±0.013 |
| E | 25.4 | ±0.025 | ±0.025 | ±0.025 |
| G | 31.75 | ±0.025 | ±0.13 | ±0.025 |
| M | 6.35 | ±0.08 | ±0.13 | ±0.05 |
| | 9.525 | ±0.08 | ±0.13 | ±0.05 |
| | 12.7 | ±0.13 | ±0.13 | ±0.08 |
| | 15.875 | ±0.15 | ±0.13 | ±0.1 |
| | 19.05 | ±0.15 | ±0.13 | ±0.1 |
| | 25.4 | ±0.18 | ±0.13 | ±0.13 |
| U | 31.75 | ±0.18 | ±0.13 | ±0.13 |
| | 6.36 | ±0.13 | ±0.13 | ±0.08 |
| | 9.525 | ±0.13 | ±0.13 | ±0.08 |
| | 12.7 | ±0.2 | ±0.13 | ±0.13 |
| | 15.875 | ±0.27 | ±0.13 | ±0.13 |
| | 19.05 | ±0.27 | ±0.13 | ±0.18 |
| | 25.4 | ±0.38 | ±0.13 | ±0.25 |
| | 31.75 | ±0.38 | ±0.13 | ±0.25 |

| Symbol | Shape |
|--------|---------|
| A | |
| G | |
| M | |
| R | |
| B, W | |
| T, H | |
| N | |
| Z, X | Special |

12

04

08

T2501

(R)

1

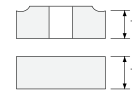
2

Cutting edge length

Thickness

Corner radius

| C | D | E | R | S | T | V | W | K | I.C size (mm) |
|----|----|----|------|----|----|----|----|----|---------------|
| 03 | 04 | | | 03 | 06 | | | | 3.97 |
| 05 | 06 | | | 05 | 09 | 09 | 03 | | 5.56 |
| 06 | 07 | | | 06 | 11 | 11 | 04 | | 6.35 |
| 08 | 09 | | | 07 | 13 | 13 | 05 | | 7.94 |
| | | | 08 | | | | | | 8 |
| 09 | 11 | | 09 | 09 | 16 | 16 | 06 | 16 | 9.525 |
| | | | 10 | | | | | | 10 |
| | | | 12 | | | | | | 12 |
| 12 | 15 | 13 | 12.7 | 12 | 22 | 22 | 08 | | 12.7 |
| 16 | 19 | | 15 | 15 | 27 | 27 | 10 | | 15.875 |
| | | | 16 | | | | | | 16 |
| 19 | 23 | | 19 | 19 | 33 | 33 | 13 | | 19.05 |
| | | | 20 | | | | | | 20 |
| | | | 25 | | | | | | 25 |
| 25 | 31 | | 25 | 25 | 44 | | | | 25.4 |
| | | | 32 | | | | | | 32 |



| Symbol | t (mm) |
|--------|--------|
| 01 | 1.59 |
| T1 | 1.98 |
| 02 | 2.38 |
| T2 | 2.78 |
| 03 | 3.18 |
| T3 | 3.97 |
| 04 | 4.76 |
| 05 | 5.56 |
| 06 | 6.35 |
| 07 | 7.94 |
| 09 | 9.52 |



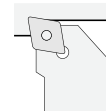
| Symbol | R (mm) |
|--------|--------|
| 01 | 0.1 |
| 02 | 0.2 |
| 04 | 0.4 |
| 05 | 0.5 |
| 08 | 0.8 |
| 12 | 1.2 |
| 16 | 1.6 |
| 20 | 2 |
| 24 | 2.4 |
| 32 | 3.2 |

1 Edge shape

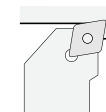
2 Hand of insert

| Symbol | Shape |
|--------|-------|
| F | |
| E | |
| T | |
| S | |

R Right hand



L Left hand

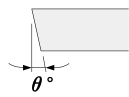


Designation system | unit: inch

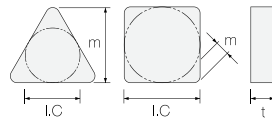
C N M G

Insert shape Clearance angle Tolerances Clamp type

| Symbol | Shape |
|--------|-------|
| C | |
| D | |
| E | |
| K | |
| R | |
| S | |
| T | |
| V | |
| W | |



| Symbol | Angle |
|--------|-------|
| N | 0° |
| A | 3° |
| B | 5° |
| C | 7° |
| P | 11° |
| D | 15° |
| E | 20° |
| F | 25° |



| Class | I.C size | Tolerance | | |
|-------|----------|-----------|----------|------------|
| | | m (inch) | t (inch) | I.C (inch) |
| A | 2 | ±0.002 | ±0.001 | ±0.001 |
| F | 3 | ±0.002 | ±0.001 | ±0.0005 |
| C | 4 | ±0.0005 | ±0.001 | ±0.001 |
| | 5 | | | |
| H | 6 | ±0.0005 | ±0.001 | ±0.0005 |
| | 8 | | | |
| E | 8 | ±0.001 | ±0.001 | ±0.001 |
| G | 10 | ±0.001 | ±0.005 | ±0.001 |
| | 2 | | | |
| M | 3 | ±0.003 | ±0.005 | ±0.002 |
| | 4 | ±0.005 | ±0.005 | ±0.003 |
| | 5 | ±0.006 | ±0.005 | ±0.004 |
| | 6 | ±0.006 | ±0.005 | ±0.004 |
| | 8 | ±0.007 | ±0.005 | ±0.005 |
| | 10 | ±0.007 | ±0.005 | ±0.005 |
| U | 2 | ±0.007 | ±0.005 | ±0.003 |
| | 3 | ±0.007 | ±0.005 | ±0.003 |
| | 4 | ±0.008 | ±0.005 | ±0.005 |
| | 5 | ±0.01 | ±0.005 | ±0.005 |
| | 6 | ±0.01 | ±0.005 | ±0.007 |
| | 8 | ±0.015 | ±0.005 | ±0.01 |
| 10 | ±0.015 | ±0.005 | ±0.01 | |

| Symbol | Shape |
|--------|---------|
| A | |
| G | |
| M | |
| R | |
| B, W | |
| T, H | |
| N | |
| Z, X | Special |

4

3

2

T2501

(R)

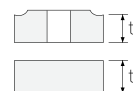
1

2

Cutting edge length

| C | D | E | R | S | T | V | W | K | Symbol | C size (inch) |
|----|----|----|------|----|----|----|----|----|--------|---------------|
| 03 | 04 | | | 03 | 06 | | | | 1.2 | 5/32 |
| 05 | 06 | | | 05 | 09 | 09 | 03 | | 1.8 | 7/32 |
| 06 | 07 | | | 06 | 11 | 11 | 04 | | 2 | 1/4 |
| 08 | 09 | | | 07 | 13 | 13 | 05 | | 2.5 | 5/16 |
| | | | 08 | | | | | | - | - |
| 09 | 11 | | 09 | 09 | 16 | 16 | 06 | 16 | 3 | 3/8 |
| | | | 10 | | | | | | - | - |
| | | | 12 | | | | | | - | - |
| 12 | 15 | 13 | 12.7 | 12 | 22 | 22 | 08 | | 4 | 1/2 |
| 16 | 19 | | 15 | 15 | 27 | 27 | 10 | | 5 | 5/8 |
| | | | 16 | | | | | | - | - |
| 19 | 23 | | 19 | 19 | 33 | 33 | 13 | | 6 | 3/4 |
| | | | 20 | | | | | | - | - |
| | | | 25 | | | | | | - | - |
| 25 | 31 | | 25 | 25 | 44 | | | | 8 | 1 |
| | | | 32 | | | | | | 10 | 1-1/4 |

Thickness



| Symbol | t (inch) |
|--------|----------|
| 1 | 1/16 |
| 1.2 | 5/64 |
| 1.5 | 3/32 |
| 1.75 | 7/64 |
| 2 | 1/8 |
| 2.5 | 5/32 |
| 3 | 3/16 |
| 3.5 | 7/32 |
| 4 | 1/4 |
| 5 | 5/16 |
| 6 | 3/8 |

Corner radius



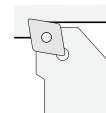
| Symbol | R (inch) |
|--------|----------|
| 0.2 | 0.004 |
| 0.5 | 0.008 |
| 1 | 1/64 |
| 2 | 1/32 |
| 3 | 3/64 |
| 4 | 1/16 |
| 5 | 5/64 |
| 6 | 3/32 |
| 7 | 7/64 |
| 8 | 1/8 |

1 Edge shape

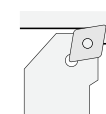
| Symbol | Shape |
|--------|-------|
| F | |
| E | |
| T | |
| S | |

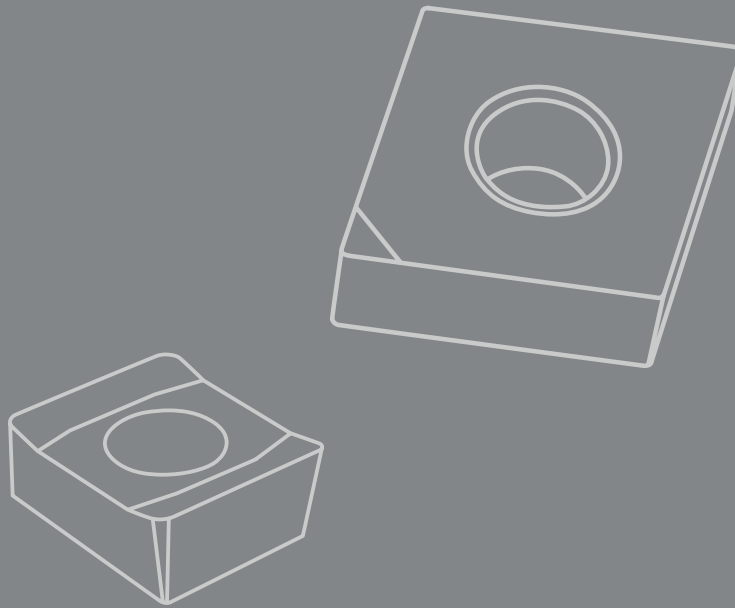
2 Hand of insert

R Right hand



L Left hand

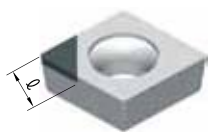




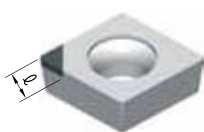
Turning_
PCD/CVD



Insert tip types



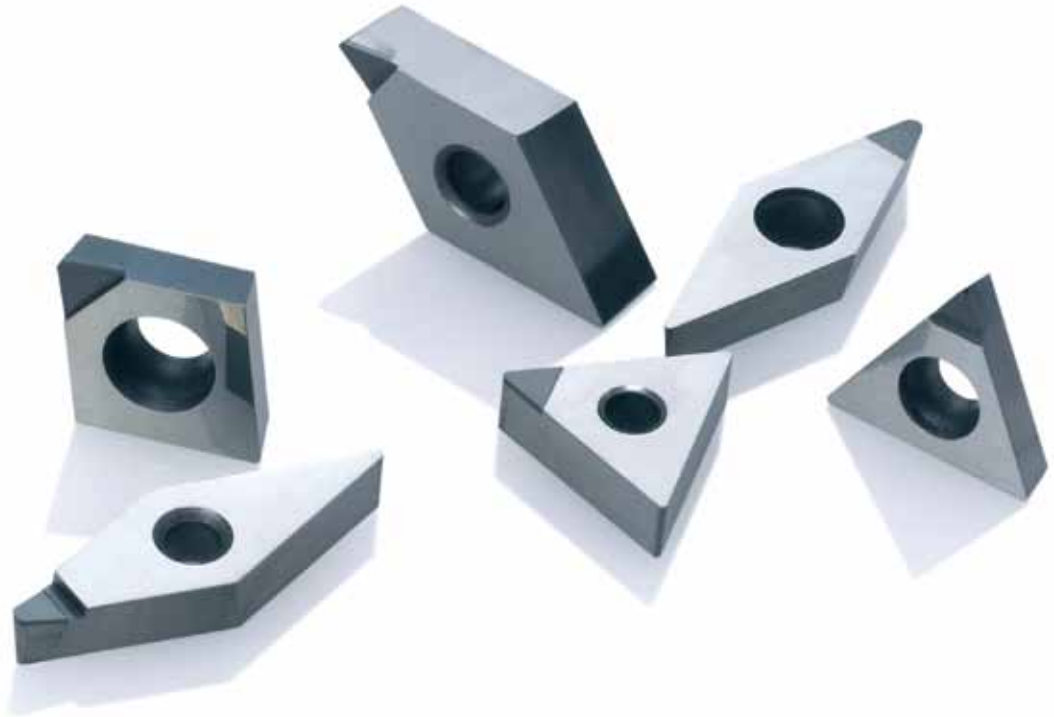
Standard



Mini tip (MT)



3D Chip breaker



CN
NEGATIVE _ hole

| CNGA | | | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | CVD | | | | | | |
|-------------|----------|-------------|--------------|--------------|-----------------|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|
| | | | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | |
| | Standard | CNGA 120402 | CNGA 43(0.5) | 12.7 | 4.76 | 0.2 | 5.16 | 4.3 | | | | | | | | | | | | | | | |
| | | | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 4.3 | | | | | | | | | | | | | | |
| | | | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 4.2 | | | | | | | | | | | | | | |
| | | | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 4.1 | | | | | | | | | | | | | | |
| | | MT | CNGA 120402 | CNGA 43(0.5) | 12.7 | 4.76 | 0.2 | 5.16 | 2.8 | | | | | | | | | | | | | | |
| | | | | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.8 | | | | | | | | | | | | | |
| | | | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2.7 | | | | | | | | | | | | | | |
| | | | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 3.1 | | | | | | | | | | | | | | |

■ MT : Mini Tip

Holder : 75p, 79p, 82p, 83p, 108p, 119p

| CNGX | | | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | CVD | | | | | | | |
|-------------|----------|-------------|--------------|--------------|-----------------|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|--|
| | | | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | | |
| | Standard | CNGX 120402 | CNGX 43(0.5) | 12.7 | 4.76 | 0.2 | 5.16 | 4.3 | | | | | | | | | | | | | | | | |
| | | | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 4.3 | | | | | | | | | | | | | | | |
| | | | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 4.2 | | | | | | | | | | | | | | | |
| | | | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 4.1 | | | | | | | | | | | | | | | |
| | | MT | CNGX 120402 | CNGX 43(0.5) | 12.7 | 4.76 | 0.2 | 5.16 | 2.8 | | | | | | | | | | | | | | | |
| | | | | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.8 | | | | | | | | | | | | | | |
| | | | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2.7 | | | | | | | | | | | | | | | |
| | | | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 3.1 | | | | | | | | | | | | | | | |

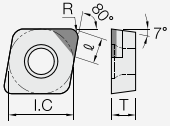
■ MT : Mini Tip

Holder : 75p, 79p, 82p, 83p, 108p, 119p

CC
POSITIVE 7° hole

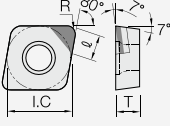
Turning

| CCGW | | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | | | | CVD | | |
|--------------|-------------|----------------|-------|-----------------|-----|-----|------|---|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|
| | | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | |
| Standard | CCGW 09T302 | CCGW 3(2.5)0.5 | 9.525 | 3.97 | 0.2 | 4.4 | 4.3 | | | | | | | | | | | | | | |
| | 09T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 4.3 | | | | | | | | | | | | | | |
| | 09T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 4.2 | | | | | | | | | | | | | | |
| | 120402 | 430 | 12.7 | 4.76 | 0.2 | 5.5 | 4.3 | | | | | | | | | | | | | | |
| | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.5 | 4.3 | | | | | | | | | | | | | | |
| | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.5 | 4.2 | | | | | | | | | | | | | | |
| | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.5 | 4.1 | | | | | | | | | | | | | | |
| MT | CCGW 060202 | CCGW 2(1.5)0.5 | 6.35 | 2.38 | 0.2 | 2.8 | 2.8 | | | | | | | | | | | | | | |
| | 060204 | 2(1.5)1 | 6.35 | 2.38 | 0.4 | 2.8 | 2.8 | | | | | | | | | | | | | | |
| | 060208 | 2(1.5)2 | 6.35 | 2.38 | 0.8 | 2.8 | 2.7 | | | | | | | | | | | | | | |
| | 09T302 | 3(2.5)0.5 | 9.525 | 3.97 | 0.2 | 4.4 | 2.8 | | | | | | | | | | | | | | |
| | 09T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 2.8 | | | | | | | | | | | | | | |
| | 09T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 2.7 | | | | | | | | | | | | | | |
| | 120402 | 430 | 12.7 | 4.76 | 0.2 | 5.5 | 2.8 | | | | | | | | | | | | | | |
| | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.5 | 2.8 | | | | | | | | | | | | | | |
| | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.5 | 2.7 | | | | | | | | | | | | | | |
| | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.5 | 3.1 | | | | | | | | | | | | | | |
| Chip breaker | CCGW 060202 | CCGW 2(1.5)0.5 | 6.35 | 2.38 | 0.2 | 2.8 | 2.8 | | | | | | | | | | | | | | |
| | 060204 | 2(1.5)1 | 6.35 | 2.38 | 0.4 | 2.8 | 2.8 | | | | | | | | | | | | | | |
| | 060208 | 2(1.5)2 | 6.35 | 2.38 | 0.8 | 2.8 | 2.7 | | | | | | | | | | | | | | |
| | 09T302 | 3(2.5)0.5 | 9.525 | 3.97 | 0.2 | 4.4 | 4.3 | | | | | | | | | | | | | | |
| | 09T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 4.3 | | | | | | | | | | | | | | |
| | 09T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 4.2 | | | | | | | | | | | | | | |
| | 120402 | 430 | 12.7 | 4.76 | 0.2 | 5.5 | 4.3 | | | | | | | | | | | | | | |
| | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.5 | 4.3 | | | | | | | | | | | | | | |
| | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.5 | 4.2 | | | | | | | | | | | | | | |
| | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.5 | 4.1 | | | | | | | | | | | | | | |



■ MT : Mini Tip Chip breaker type : Rough / Finish / Semi Finish Holder : 88p, 112p

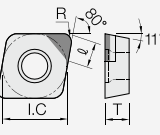
| CCGT | | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | | | | CVD | | |
|-------------|-------------|----------------|-------|-----------------|-----|-----|------|---|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|
| | | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | |
| Standard | CCGT 09T302 | CCGT 3(2.5)0.5 | 9.525 | 3.97 | 0.2 | 4.4 | 4.3 | | | | | | | | | | | | | | |
| | 09T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 4.3 | | | | | | | | | | | | | | |
| | 09T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 4.2 | | | | | | | | | | | | | | |
| | 120402 | 430 | 12.7 | 4.76 | 0.2 | 5.5 | 4.3 | | | | | | | | | | | | | | |
| | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.5 | 4.3 | | | | | | | | | | | | | | |
| | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.5 | 4.2 | | | | | | | | | | | | | | |
| | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.5 | 4.1 | | | | | | | | | | | | | | |
| MT | CCGT 060202 | CCGT 2(1.5)0.5 | 6.35 | 2.38 | 0.2 | 2.8 | 2.8 | | | | | | | | | | | | | | |
| | 060204 | 2(1.5)1 | 6.35 | 2.38 | 0.4 | 2.8 | 2.8 | | | | | | | | | | | | | | |
| | 060208 | 2(1.5)2 | 6.35 | 2.38 | 0.8 | 2.8 | 2.7 | | | | | | | | | | | | | | |
| | 09T302 | 3(2.5)0.5 | 9.525 | 3.97 | 0.2 | 4.4 | 2.8 | | | | | | | | | | | | | | |
| | 09T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 2.8 | | | | | | | | | | | | | | |
| | 09T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 2.7 | | | | | | | | | | | | | | |
| | 120402 | 430 | 12.7 | 4.76 | 0.2 | 5.5 | 2.8 | | | | | | | | | | | | | | |
| | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.5 | 2.8 | | | | | | | | | | | | | | |
| | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.5 | 2.7 | | | | | | | | | | | | | | |
| | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.5 | 3.1 | | | | | | | | | | | | | | |



■ MT : Mini Tip Holder : 88p, 112p

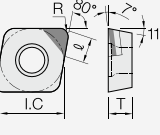
CP

POSITIVE 11 _ hole

| CPGW | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | CVD | | | | | | |
|---|-------------|------------------|------------------|-----------|-------|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|
| | Metric | Inch | I.C | T | R | Hole | φ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | |
| | | | | | | | | | | | | | | | | | | | | | |
|  | Standard | CPGW 090302 | CPGW 320.5 | 9.525 | 3.18 | 0.2 | 4.4 | 4.3 | | | | | | | | | | | | | |
| | | | 090304 | 321 | 9.525 | 3.18 | 0.4 | 4.4 | 4.3 | | | | | | | | | | | | |
| | | | 090308 | 322 | 9.525 | 3.18 | 0.8 | 4.4 | 4.2 | | | | | | | | | | | | |
| | MT | CPGW 080202 | CPGW 2.5(1.5)0.5 | 7.94 | 2.38 | 0.2 | 3.4 | 2.8 | | | | | | | | | | | | | |
| | | | 080204 | 2.5(1.5)1 | 7.94 | 2.38 | 0.4 | 3.4 | 2.8 | | | | | | | | | | | | |
| | | | 090302 | 320.5 | 9.525 | 3.18 | 0.2 | 4.4 | 2.8 | | | | | | | | | | | | |
| | | | 090304 | 321 | 9.525 | 3.18 | 0.4 | 4.4 | 2.8 | | | | | | | | | | | | |
| | | | 090308 | 322 | 9.525 | 3.18 | 0.8 | 4.4 | 2.7 | | | | | | | | | | | | |
| | | | 090308 | 322 | 9.525 | 3.18 | 0.8 | 4.4 | 4.2 | | | | | | | | | | | | |
| Chip breaker | CPGW 080202 | CPGW 2.5(1.5)0.5 | 7.94 | 2.38 | 0.2 | 3.4 | 4.3 | | | | | | | | | | | | | | |
| | | 080204 | 2.5(1.5)1 | 7.94 | 2.38 | 0.4 | 3.4 | 4.3 | | | | | | | | | | | | | |
| | | 090302 | 320.5 | 9.525 | 3.18 | 0.2 | 4.4 | 4.3 | | | | | | | | | | | | | |
| | | 090304 | 321 | 9.525 | 3.18 | 0.4 | 4.4 | 4.3 | | | | | | | | | | | | | |
| | | 090308 | 322 | 9.525 | 3.18 | 0.8 | 4.4 | 4.2 | | | | | | | | | | | | | |
| | | 090308 | 322 | 9.525 | 3.18 | 0.8 | 4.4 | 4.2 | | | | | | | | | | | | | |

■ MT : Mini Tip Chip breaker type : Rough / Finish / Semi Finish

 Holder : 112p

| CPGT | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | CVD | | | | | | |
|---|----------|-------------|------------------|-----------|-------|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|
| | Metric | Inch | I.C | T | R | Hole | φ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | |
| | | | | | | | | | | | | | | | | | | | | | |
|  | Standard | CPGT 090302 | CPGT 320.5 | 9.525 | 3.18 | 0.2 | 4.4 | 4.3 | | | | | | | | | | | | | |
| | | | 090304 | 321 | 9.525 | 3.18 | 0.4 | 4.4 | 4.3 | | | | | | | | | | | | |
| | | | 090308 | 322 | 9.525 | 3.18 | 0.8 | 4.4 | 4.2 | | | | | | | | | | | | |
| | MT | CPGT 080202 | CPGT 2.5(1.5)0.5 | 7.94 | 2.38 | 0.2 | 3.4 | 2.8 | | | | | | | | | | | | | |
| | | | 080204 | 2.5(1.5)1 | 7.94 | 2.38 | 0.4 | 3.4 | 2.8 | | | | | | | | | | | | |
| | | | 090302 | 320.5 | 9.525 | 3.18 | 0.2 | 4.4 | 2.8 | | | | | | | | | | | | |
| | | | 090304 | 321 | 9.525 | 3.18 | 0.4 | 4.4 | 2.8 | | | | | | | | | | | | |
| | | | 090308 | 322 | 9.525 | 3.18 | 0.8 | 4.4 | 2.7 | | | | | | | | | | | | |
| | | | 090308 | 322 | 9.525 | 3.18 | 0.8 | 4.4 | 2.7 | | | | | | | | | | | | |

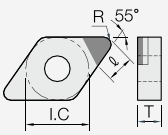
■ MT : Mini Tip

 Holder : 112p

DN

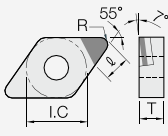
NEGATIVE _ hole

Turning

| DNGA | | | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | | CVD | | | | | |
|---|----------|------|----------|--------|-----------------|-------|-------|-------|------|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|
| | | | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | |
|  | Standard | DNGA | 110404 | DNGA | 331 | 9.525 | 4.76 | 0.4 | 3.81 | 3.9 | | | | | | | | | | | | | |
| | | | | 110408 | | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 3.5 | | | | | | | | | | | | |
| | | | | 150404 | | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 3.9 | | | | | | | | | | | | |
| | | | | 150408 | | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 3.5 | | | | | | | | | | | | |
| | | | | 150412 | | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 3.1 | | | | | | | | | | | | |
| | | | | DNGA | 110404 | DNGA | 331 | 9.525 | 4.76 | 0.4 | 3.81 | 2.4 | | | | | | | | | | | |
| | MT | | | | | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 2 | | | | | | | | | | | | |
| | | | | | | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.4 | | | | | | | | | | | | |
| | | | | | | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2 | | | | | | | | | | | | |
| | | | | | | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 2.1 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |

■ MT : Mini Tip

Holder : 75p, 79p, 80p, 83p, 84p, 108p, 109p

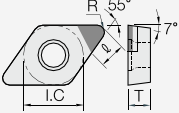
| DNGX | | | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | | CVD | | | | | |
|---|----------|------|----------|--------|-----------------|-------|-------|-------|------|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|
| | | | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | |
|  | Standard | DNGX | 110404 | DNGX | 331 | 9.525 | 4.76 | 0.4 | 3.81 | 3.9 | | | | | | | | | | | | | |
| | | | | 110408 | | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 3.5 | | | | | | | | | | | | |
| | | | | 150404 | | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 3.9 | | | | | | | | | | | | |
| | | | | 150408 | | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 3.5 | | | | | | | | | | | | |
| | | | | 150412 | | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 3.1 | | | | | | | | | | | | |
| | | | | DNGX | 110404 | DNGX | 331 | 9.525 | 4.76 | 0.4 | 3.81 | 2.4 | | | | | | | | | | | |
| | MT | | | | | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 2 | | | | | | | | | | | | |
| | | | | | | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.4 | | | | | | | | | | | | |
| | | | | | | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2 | | | | | | | | | | | | |
| | | | | | | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 2.1 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |

■ MT : Mini Tip

Holder : 75p, 79p, 80p, 83p, 84p, 108p, 109p

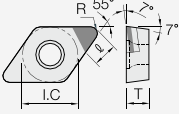
DC

POSITIVE 7₋ hole

| DCGW | ISO code | | Dimensions (mm) | | | | | | PCD | | | | | | | | | | CVD | | |
|---|-------------|----------------|-----------------|-----------|-------|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | |
| | | | | | | | | | | | | | | | | | | | | | |
|  | Standard | DCGW 11T302 | DCGW 3(2.5)0.5 | 9.525 | 3.97 | 0.4 | 4.4 | 4 | | | | | | | | | | | | | |
| | | | 11T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 3.9 | | | | | | | | | | | | |
| | | | 11T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 3.5 | | | | | | | | | | | | |
| | | | 150404 | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 3.9 | | | | | | | | | | | | |
| | | | 150408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 3.5 | | | | | | | | | | | | |
| | MT | DCGW 070202 | DCGW 2(1.5)0.5 | 6.35 | 2.38 | 0.2 | 2.8 | 2.5 | | | | | | | | | | | | | |
| | | | 070204 | 2(1.5)1 | 6.35 | 2.38 | 0.4 | 2.8 | 2.4 | | | | | | | | | | | | |
| | | | 11T302 | 3(2.5)0.5 | 9.525 | 3.97 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | | |
| | | | 11T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 2.4 | | | | | | | | | | | | |
| | | | 11T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 2 | | | | | | | | | | | | |
| Chip breaker | DCGW 070202 | DCGW 2(1.5)0.5 | 6.35 | 2.38 | 0.2 | 2.8 | 2.5 | | | | | | | | | | | | | | |
| | | 070204 | 2(1.5)1 | 6.35 | 2.38 | 0.4 | 2.8 | 2.4 | | | | | | | | | | | | | |
| | | 11T302 | 3(2.5)0.5 | 9.525 | 3.97 | 0.4 | 4.4 | 4 | | | | | | | | | | | | | |
| | | 11T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 3.9 | | | | | | | | | | | | | |
| | | 11T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 3.5 | | | | | | | | | | | | | |

■ MT : Mini Tip Chip breaker type : Rough / Finish / Semi Finish

Holder : 89p, 113p, 114p

| DCGT | ISO code | | Dimensions (mm) | | | | | | PCD | | | | | | | | | | CVD | | |
|---|----------|-------------|-----------------|-----------|-------|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | |
| | | | | | | | | | | | | | | | | | | | | | |
|  | Standard | DCGT 11T302 | DCGT 3(2.5)0.5 | 9.525 | 3.97 | 0.4 | 4.4 | 4 | | | | | | | | | | | | | |
| | | | 11T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 3.9 | | | | | | | | | | | | |
| | | | 11T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 3.5 | | | | | | | | | | | | |
| | | | 150404 | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 3.9 | | | | | | | | | | | | |
| | | | 150408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 3.5 | | | | | | | | | | | | |
| | MT | DCGT 070202 | DCGT 2(1.5)0.5 | 6.35 | 2.38 | 0.2 | 2.8 | 2.5 | | | | | | | | | | | | | |
| | | | 070204 | 2(1.5)1 | 6.35 | 2.38 | 0.4 | 2.8 | 2.4 | | | | | | | | | | | | |
| | | | 11T302 | 3(2.5)0.5 | 9.525 | 3.97 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | | |
| | | | 11T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 2.4 | | | | | | | | | | | | |
| | | | 11T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 2 | | | | | | | | | | | | |

■ MT : Mini Tip

Holder : 89p, 113p, 114p

DP

POSITIVE 11 _ hole

Turning

| ISO code | | | Dimensions (mm) | | | | | | PCD | | | | | | | | | | CVD | | | |
|----------|--------------|-------------|-----------------|-------|------|-----|-----|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|
| | | | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | |
| | Standard | DPGW 11T302 | DPGW 3(2.5)0.5 | 9.525 | 3.97 | 0.4 | 4.4 | 4 | | | | | | | | | | | | | | |
| | | 11T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 3.9 | | | | | | | | | | | | | | |
| | | 11T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 3.5 | | | | | | | | | | | | | | |
| | MT | DPGW 070202 | DPGW 2(1.5)0.5 | 6.35 | 2.38 | 0.2 | 2.8 | 2.5 | | | | | | | | | | | | | | |
| | | 070204 | 2(1.5)1 | 6.35 | 2.38 | 0.4 | 2.8 | 2.4 | | | | | | | | | | | | | | |
| | | 11T302 | 3(2.5)0.5 | 9.525 | 3.97 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | | | | |
| | Chip breaker | 11T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 2.4 | | | | | | | | | | | | | | |
| | | 11T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 2 | | | | | | | | | | | | | | |
| | | DPGW 070202 | DPGW 2(1.5)0.5 | 6.35 | 2.38 | 0.2 | 2.8 | 2.5 | | | | | | | | | | | | | | |
| | | 070204 | 2(1.5)1 | 6.35 | 2.38 | 0.4 | 2.8 | 2.4 | | | | | | | | | | | | | | |
| | | 11T302 | 3(2.5)0.5 | 9.525 | 3.97 | 0.4 | 4.4 | 4 | | | | | | | | | | | | | | |
| | | 11T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 3.9 | | | | | | | | | | | | | | |
| 11T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 3.5 | | | | | | | | | | | | | | | | |

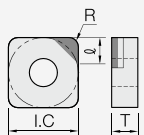
■ MT : Mini Tip Chip breaker type : Rough / Finish / Semi Finish

| ISO code | | | Dimensions (mm) | | | | | | PCD | | | | | | | | | | CVD | | | |
|----------|----------|-------------|-----------------|-------|------|-----|-----|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|
| | | | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | |
| | Standard | DPGT 11T302 | DPGT 3(2.5)0.5 | 9.525 | 3.97 | 0.4 | 4.4 | 4 | | | | | | | | | | | | | | |
| | | 11T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 3.9 | | | | | | | | | | | | | | |
| | | 11T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 3.5 | | | | | | | | | | | | | | |
| | MT | DPGT 070202 | DPGT 2(1.5)0.5 | 6.35 | 2.38 | 0.2 | 2.8 | 2.5 | | | | | | | | | | | | | | |
| | | 070204 | 2(1.5)1 | 6.35 | 2.38 | 0.4 | 2.8 | 2.4 | | | | | | | | | | | | | | |
| | | 11T302 | 3(2.5)0.5 | 9.525 | 3.97 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | | | | |
| | | 11T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 2.4 | | | | | | | | | | | | | | |
| | | 11T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 2 | | | | | | | | | | | | | | |

■ MT : Mini Tip

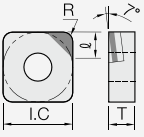
SN

NEGATIVE _ hole

| SNGA | | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | | CVD | | | | | | |
|---|----------|----------|--------|-----------------|--------|-------|-------|------|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|--|
| | | Metric | Inch | I.C | T | R | Hole | φ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | | |
|  | Standard | SNGA | 090304 | SNGA | 321 | 9.525 | 3.18 | 0.4 | 3.81 | 4.4 | | | | | | | | | | | | | |
| | | | | 090308 | | 322 | 9.525 | 3.18 | 0.8 | 3.81 | 4.4 | | | | | | | | | | | | |
| | | | | | 120404 | | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 4.4 | | | | | | | | | | | |
| | | | | | 120408 | | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 4.4 | | | | | | | | | | | |
| | | | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 4.4 | | | | | | | | | | | |
| | MT | SNGA | 090304 | SNGA | 321 | 9.525 | 3.18 | 0.4 | 3.81 | 2.9 | | | | | | | | | | | | | |
| | | | | 090308 | | 322 | 9.525 | 3.18 | 0.8 | 3.81 | 2.9 | | | | | | | | | | | | |
| | | | | | 120404 | | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.9 | | | | | | | | | | | |
| | | | | | 120408 | | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2.9 | | | | | | | | | | | |
| | | | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 3.4 | | | | | | | | | | | |

■ MT : Mini Tip

Holder : 76p, 77p, 80p, 81p, 84p, 85p, 109p, 119p

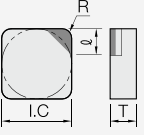
| SNGX | | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | | CVD | | | | | | |
|---|----------|----------|--------|-----------------|--------|-------|-------|------|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|--|
| | | Metric | Inch | I.C | T | R | Hole | φ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | | |
|  | Standard | SNGX | 090304 | SNGX | 321 | 9.525 | 3.18 | 0.4 | 3.81 | 4.4 | | | | | | | | | | | | | |
| | | | | 090308 | | 322 | 9.525 | 3.18 | 0.8 | 3.81 | 4.4 | | | | | | | | | | | | |
| | | | | | 120404 | | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 4.4 | | | | | | | | | | | |
| | | | | | 120408 | | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 4.4 | | | | | | | | | | | |
| | | | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 4.4 | | | | | | | | | | | |
| | MT | SNGX | 090304 | SNGX | 321 | 9.525 | 3.18 | 0.4 | 3.81 | 2.9 | | | | | | | | | | | | | |
| | | | | 090308 | | 322 | 9.525 | 3.18 | 0.8 | 3.81 | 2.9 | | | | | | | | | | | | |
| | | | | | 120404 | | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.9 | | | | | | | | | | | |
| | | | | | 120408 | | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2.9 | | | | | | | | | | | |
| | | | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 3.4 | | | | | | | | | | | |

■ MT : Mini Tip

Holder : 76p, 77p, 80p, 81p, 84p, 85p, 109p, 119p

SNGN

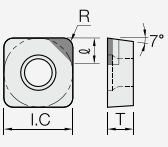
NEGATIVE

| SNGN | | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | | CVD | | | | | | |
|---|----------|----------|--------|-----------------|--------|-------|-------|------|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|--|
| | | Metric | Inch | I.C | T | R | Hole | φ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | | |
|  | Standard | SNGN | 090304 | SNGN | 321 | 9.525 | 3.18 | 0.4 | 3.81 | 4.4 | | | | | | | | | | | | | |
| | | | | 090308 | | 322 | 9.525 | 3.18 | 0.8 | 3.81 | 4.4 | | | | | | | | | | | | |
| | | | | | 120404 | | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 4.4 | | | | | | | | | | | |
| | | | | | 120408 | | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 4.4 | | | | | | | | | | | |
| | | | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 4.4 | | | | | | | | | | | |
| | MT | SNGN | 090304 | SNGN | 321 | 9.525 | 3.18 | 0.4 | 3.81 | 2.9 | | | | | | | | | | | | | |
| | | | | 090308 | | 322 | 9.525 | 3.18 | 0.8 | 3.81 | 2.9 | | | | | | | | | | | | |
| | | | | | 120404 | | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.9 | | | | | | | | | | | |
| | | | | | 120408 | | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2.9 | | | | | | | | | | | |
| | | | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 3.4 | | | | | | | | | | | |

■ MT : Mini Tip

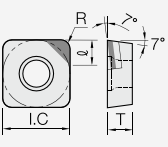
SC

POSITIVE 7 _ hole

| | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | | CVD | | | | |
|---|-------------|-------------|-----------------|------|------|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|
| | SCGW | | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | |
| | Metric | Inch | | | | | | | | | | | | | | | | | | |
|  | Standard | SCGW 120404 | SCGW 431 | 12.7 | 4.76 | 0.4 | 5.5 | 4.4 | | | | | | | | | | | | |
| | | | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.5 | 4.4 | | | | | | | | | | | |
| | | | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.5 | 4.4 | | | | | | | | | | | |
| | MT | SCGW 120404 | SCGW 431 | 12.7 | 4.76 | 0.4 | 5.5 | 2.9 | | | | | | | | | | | | |
| | | | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.5 | 2.9 | | | | | | | | | | | |
| | | | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.5 | 3.4 | | | | | | | | | | | |

■ MT : Mini Tip

Holder : 91p, 114p

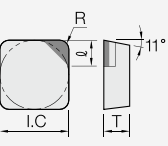
| | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | | CVD | | | | |
|--|-------------|-------------|-----------------|------|------|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|
| | SCGT | | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | |
| | Metric | Inch | | | | | | | | | | | | | | | | | | |
|  | Standard | SCGT 120404 | SCGT 431 | 12.7 | 4.76 | 0.4 | 5.5 | 4.4 | | | | | | | | | | | | |
| | | | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.5 | 4.4 | | | | | | | | | | | |
| | | | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.5 | 4.4 | | | | | | | | | | | |
| | MT | SCGT 120404 | SCGT 431 | 12.7 | 4.76 | 0.4 | 5.5 | 2.9 | | | | | | | | | | | | |
| | | | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.5 | 2.9 | | | | | | | | | | | |
| | | | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.5 | 3.4 | | | | | | | | | | | |

■ MT : Mini Tip

Holder : 91p, 114p

SPGN

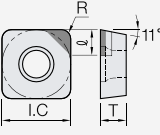
POSITIVE 11

| | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | | CVD | | | | |
|---|-------------|-------------|-----------------|-------|-------|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|
| | SPGN | | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | |
| | Metric | Inch | | | | | | | | | | | | | | | | | | |
|  | Standard | SPGN 090304 | SPGN 321 | 9.525 | 3.18 | 0.4 | 4.4 | | | | | | | | | | | | | |
| | | | 090308 | 322 | 9.525 | 3.18 | 0.8 | 4.4 | | | | | | | | | | | | |
| | | | 120304 | 421 | 12.7 | 4.76 | 0.4 | 4.4 | | | | | | | | | | | | |
| | MT | SPGN 090304 | SPGN 321 | 9.525 | 3.18 | 0.4 | 2.9 | | | | | | | | | | | | | |
| | | | 090308 | 322 | 9.525 | 3.18 | 0.8 | 2.9 | | | | | | | | | | | | |
| | | | 120304 | 421 | 12.7 | 4.76 | 0.4 | 2.9 | | | | | | | | | | | | |

■ MT : Mini Tip

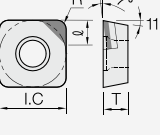
SP

POSITIVE 11 _ hole

| SPGW | ISO code | | Dimensions (mm) | | | | | | PCD | | | | | | | | CVD | | | | |
|---|----------|-------------|-----------------|------|------|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | |
| | | | | | | | | | | | | | | | | | | | | | |
|  | Standard | SPGW 090304 | SPGW 321 | 12.7 | 4.76 | 0.4 | 4.4 | 4.4 | | | | | | | | | | | | | |
| | | | 090308 | 322 | 12.7 | 4.76 | 0.8 | 4.4 | 4.4 | | | | | | | | | | | | |
| | | | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.5 | 4.4 | | | | | | | | | | | | |
| | | | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.5 | 4.4 | | | | | | | | | | | | |
| | | | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.5 | 4.4 | | | | | | | | | | | | |
| | MT | SPGW 090304 | SPGW 321 | 12.7 | 4.76 | 0.4 | 4.4 | 2.9 | | | | | | | | | | | | | |
| | | | 090308 | 322 | 12.7 | 4.76 | 0.8 | 4.4 | 2.9 | | | | | | | | | | | | |
| | | | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.5 | 2.9 | | | | | | | | | | | | |
| | | | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.5 | 2.9 | | | | | | | | | | | | |
| | | | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.5 | 3.4 | | | | | | | | | | | | |

■ MT : Mini Tip

Holder : 115p

| SPGT | ISO code | | Dimensions (mm) | | | | | | PCD | | | | | | | | CVD | | | | |
|---|----------|-------------|-----------------|------|------|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | |
| | | | | | | | | | | | | | | | | | | | | | |
|  | Standard | SPGT 090304 | SPGT 321 | 12.7 | 4.76 | 0.4 | 4.4 | 4.4 | | | | | | | | | | | | | |
| | | | 090308 | 322 | 12.7 | 4.76 | 0.8 | 4.4 | 4.4 | | | | | | | | | | | | |
| | | | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.5 | 4.4 | | | | | | | | | | | | |
| | | | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.5 | 4.4 | | | | | | | | | | | | |
| | | | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.5 | 4.4 | | | | | | | | | | | | |
| | MT | SPGT 090304 | SPGT 321 | 12.7 | 4.76 | 0.4 | 4.4 | 2.9 | | | | | | | | | | | | | |
| | | | 090308 | 322 | 12.7 | 4.76 | 0.8 | 4.4 | 2.9 | | | | | | | | | | | | |
| | | | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.5 | 2.9 | | | | | | | | | | | | |
| | | | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.5 | 2.9 | | | | | | | | | | | | |
| | | | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.5 | 3.4 | | | | | | | | | | | | |

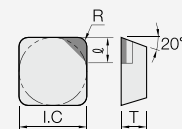
■ MT : Mini Tip

Holder : 115p

SEGN

POSITIVE 20

| SEGN | ISO code | | Dimensions (mm) | | | | | | PCD | | | | | | | | CVD | | |
|----------|-------------|----------|-----------------|------|------|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 |
| | | | | | | | | | | | | | | | | | | | |
| Standard | SEGN 120304 | SEGN 431 | 12.7 | 3.18 | 0.4 | | 4.4 | | | | | | | | | | | | |
| | | 120308 | 432 | 12.7 | 3.18 | 0.8 | | 4.4 | | | | | | | | | | | |



TN

NEGATIVE _ hole

Turning

| TNGA | | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | | | CVD | | | | | |
|------|----------|----------|--------|-----------------|---------|-------|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|--|
| | | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | | |
| | Standard | TNGA | 110302 | TNGA | 22(0.5) | 6.35 | 3.18 | 0.2 | 2.4 | 4.1 | | | | | | | | | | | | | |
| | | | 110304 | | 221 | 6.35 | 3.18 | 0.4 | 2.4 | 4 | | | | | | | | | | | | | |
| | | | 160402 | | 33(0.5) | 9.525 | 4.76 | 0.2 | 3.81 | 4.1 | | | | | | | | | | | | | |
| | | | 160404 | | 331 | 9.525 | 4.76 | 0.4 | 3.81 | 4 | | | | | | | | | | | | | |
| | | | 160408 | | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 3.7 | | | | | | | | | | | | | |
| | | | 220404 | | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 4 | | | | | | | | | | | | | |
| | MT | TNGA | 110302 | TNGA | 22(0.5) | 6.35 | 3.18 | 0.2 | 2.4 | 2.6 | | | | | | | | | | | | | |
| | | | 110304 | | 221 | 6.35 | 3.18 | 0.4 | 2.4 | 2.5 | | | | | | | | | | | | | |
| | | | 160402 | | 33(0.5) | 9.525 | 4.76 | 0.2 | 3.81 | 2.6 | | | | | | | | | | | | | |
| | | | 160404 | | 331 | 9.525 | 4.76 | 0.4 | 3.81 | 2.5 | | | | | | | | | | | | | |
| | | | 160408 | | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 2.2 | | | | | | | | | | | | | |

■ MT : Mini Tip

Holder : 77p, 81p, 85p, 86p, 110p, 111p

| TNGX | | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | | | CVD | | | | | |
|------|----------|----------|--------|-----------------|---------|-------|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|--|
| | | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | | |
| | Standard | TNGX | 110302 | TNGX | 22(0.5) | 6.35 | 3.18 | 0.2 | 2.4 | 4.1 | | | | | | | | | | | | | |
| | | | 110304 | | 221 | 6.35 | 3.18 | 0.4 | 2.4 | 4 | | | | | | | | | | | | | |
| | | | 160402 | | 33(0.5) | 9.525 | 4.76 | 0.2 | 3.81 | 4.1 | | | | | | | | | | | | | |
| | | | 160404 | | 331 | 9.525 | 4.76 | 0.4 | 3.81 | 4 | | | | | | | | | | | | | |
| | | | 160408 | | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 3.7 | | | | | | | | | | | | | |
| | | | 220404 | | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 4 | | | | | | | | | | | | | |
| | MT | TNGX | 110302 | TNGX | 22(0.5) | 6.35 | 3.18 | 0.2 | 2.4 | 2.6 | | | | | | | | | | | | | |
| | | | 110304 | | 221 | 6.35 | 3.18 | 0.4 | 2.4 | 2.5 | | | | | | | | | | | | | |
| | | | 160402 | | 33(0.5) | 9.525 | 4.76 | 0.2 | 3.81 | 2.6 | | | | | | | | | | | | | |
| | | | 160404 | | 331 | 9.525 | 4.76 | 0.4 | 3.81 | 2.5 | | | | | | | | | | | | | |
| | | | 160408 | | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 2.2 | | | | | | | | | | | | | |

■ MT : Mini Tip

Holder : 77p, 81p, 85p, 86p, 110p, 111p

TBGN

POSITIVE 5

| TBGN | | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | | | CVD | | | | | |
|------|----------|----------|--------|-----------------|-------------|------|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|--|
| | | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | | |
| | Standard | TBGN | 060102 | TBGN | (1.2)10.5 | 3.97 | 1.59 | 0.2 | | 2.1 | | | | | | | | | | | | | |
| | | | 060104 | | (1.2)11 | 3.97 | 1.59 | 0.4 | | 2 | | | | | | | | | | | | | |
| | | | 080202 | | 1.5(1.5)0.5 | 4.76 | 2.38 | 0.2 | | 2.6 | | | | | | | | | | | | | |
| | | | 080204 | | 1.5(1.5)1 | 4.76 | 2.38 | 0.4 | | 2.5 | | | | | | | | | | | | | |

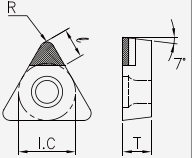


TCGW

POSITIVE 7 _ hole

Turning

| TCGW | ISO code | | Dimensions (mm) | | | | | | PCD | | | | | | | | | | CVD | |
|--------------|-------------|----------------|-----------------|------|-----|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | |
| | | | | | | | | | | | | | | | | | | | | |
| Standard | TCGW 090202 | TCGW 2(1.5)0.5 | 5.56 | 2.38 | 0.2 | 2.5 | 3.6 | | | | | | | | | | | | | |
| | 090204 | 2(1.5)1 | 5.56 | 2.38 | 0.4 | 2.5 | 3.5 | | | | | | | | | | | | | |
| | 110202 | 2(1.5)0.5 | 6.35 | 2.38 | 0.2 | 2.8 | 4.1 | | | | | | | | | | | | | |
| | 110204 | 2(1.5)1 | 6.35 | 2.38 | 0.4 | 2.8 | 4 | | | | | | | | | | | | | |
| | 110208 | 2(1.5)2 | 6.35 | 2.38 | 0.8 | 2.8 | 3.7 | | | | | | | | | | | | | |
| | 16T302 | 3(2.5)0.5 | 9.525 | 3.97 | 0.2 | 4.4 | 4.1 | | | | | | | | | | | | | |
| | 16T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 4 | | | | | | | | | | | | | |
| | 16T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 3.7 | | | | | | | | | | | | | |
| MT | TCGW 090202 | TCGW 2(1.5)0.5 | 5.56 | 2.38 | 0.2 | 2.5 | 2.6 | | | | | | | | | | | | | |
| | 090204 | 2(1.5)1 | 5.56 | 2.38 | 0.4 | 2.5 | 2.5 | | | | | | | | | | | | | |
| | 110202 | 2(1.5)0.5 | 6.35 | 2.38 | 0.2 | 2.8 | 2.6 | | | | | | | | | | | | | |
| | 110204 | 2(1.5)1 | 6.35 | 2.38 | 0.4 | 2.8 | 2.5 | | | | | | | | | | | | | |
| | 110208 | 2(1.5)2 | 6.35 | 2.38 | 0.8 | 2.8 | 2.2 | | | | | | | | | | | | | |
| | 16T302 | 3(2.5)0.5 | 9.525 | 3.97 | 0.2 | 4.4 | 2.6 | | | | | | | | | | | | | |
| | 16T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | | | |
| | 16T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 2.2 | | | | | | | | | | | | | |
| Chip breaker | TCGW 090202 | TCGW 2(1.5)0.5 | 5.56 | 2.38 | 0.2 | 2.5 | 3.6 | | | | | | | | | | | | | |
| | 090204 | 2(1.5)1 | 5.56 | 2.38 | 0.4 | 2.5 | 3.5 | | | | | | | | | | | | | |
| | 110202 | 2(1.5)0.5 | 6.35 | 2.38 | 0.2 | 2.8 | 4.1 | | | | | | | | | | | | | |
| | 110204 | 2(1.5)1 | 6.35 | 2.38 | 0.4 | 2.8 | 4 | | | | | | | | | | | | | |
| | 110208 | 2(1.5)2 | 6.35 | 2.38 | 0.8 | 2.8 | 3.7 | | | | | | | | | | | | | |
| | 16T302 | 3(2.5)0.5 | 9.525 | 3.97 | 0.2 | 4.4 | 4.1 | | | | | | | | | | | | | |
| | 16T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 4 | | | | | | | | | | | | | |
| | 16T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 3.7 | | | | | | | | | | | | | |



■ MT : Mini Tip Chip breaker type : Rough / Finish / Semi Finish

Holder : 92p, 93p, 115p

TCGT

POSITIVE 7 _ hole

| TCGT | ISO code | | Dimensions (mm) | | | | | | PCD | | | | | | | | | | CVD | | | |
|------|----------|--------|-----------------|---------|-----------|-----------|-------|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP760 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| | Standard | TCGT | 090202 | TCGT | 2(1.5)0.5 | 5.56 | 2.38 | 0.2 | 2.5 | 3.6 | | | | | | | | | | | | |
| | | | | 090204 | | 2(1.5)1 | 5.56 | 2.38 | 0.4 | 2.5 | 3.5 | | | | | | | | | | | |
| | | | | 110202 | | 2(1.5)0.5 | 6.35 | 2.38 | 0.2 | 2.8 | 4.1 | | | | | | | | | | | |
| | | | | 110204 | | 2(1.5)1 | 6.35 | 2.38 | 0.4 | 2.8 | 4 | | | | | | | | | | | |
| | | | | 110208 | | 2(1.5)2 | 6.35 | 2.38 | 0.8 | 2.8 | 3.7 | | | | | | | | | | | |
| | | | | 16T302 | | 3(2.5)0.5 | 9.525 | 3.97 | 0.2 | 4.4 | 4.1 | | | | | | | | | | | |
| | | | | 16T304 | | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 4 | | | | | | | | | | | |
| | | | | 16T308 | | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 3.7 | | | | | | | | | | | |
| | MT | TCGT | 090202 | TCGT | 2(1.5)0.5 | 5.56 | 2.38 | 0.2 | 2.5 | 2.6 | | | | | | | | | | | | |
| | | | | 090204 | | 2(1.5)1 | 5.56 | 2.38 | 0.4 | 2.5 | 2.5 | | | | | | | | | | | |
| | | | | 110202 | | 2(1.5)0.5 | 6.35 | 2.38 | 0.2 | 2.8 | 2.6 | | | | | | | | | | | |
| | | | | 110204 | | 2(1.5)1 | 6.35 | 2.38 | 0.4 | 2.8 | 2.5 | | | | | | | | | | | |
| | | | | 110208 | | 2(1.5)2 | 6.35 | 2.38 | 0.8 | 2.8 | 2.2 | | | | | | | | | | | |
| | | | | 16T302 | | 3(2.5)0.5 | 9.525 | 3.97 | 0.2 | 4.4 | 2.6 | | | | | | | | | | | |
| | | 16T304 | | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | | | |
| | | 16T308 | | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 2.2 | | | | | | | | | | | | | |

■ MT : Mini Tip

Holder : 92p, 93p, 115p

TPGN

POSITIVE 11

Turning

| TPGN | | | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | | | | CVD | | | |
|------|--------------|-------------|--------------|---------|-----------------|------|-----|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|
| | | | Metric | Inch | I.C | T | R | Hole | φ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | |
| | Standard | TPGN 110302 | TPGN 22(0.5) | 6.35 | 3.18 | 0.2 | | 4.1 | | | | | | | | | | | | | | | |
| | | | 110304 | 221 | 6.35 | 3.18 | 0.4 | | 4 | | | | | | | | | | | | | | |
| | | | 110308 | 222 | 6.35 | 3.18 | 0.8 | | 3.7 | | | | | | | | | | | | | | |
| | | | 160302 | 32(0.5) | 9.525 | 3.18 | 0.2 | | 4.1 | | | | | | | | | | | | | | |
| | | | 160304 | 321 | 9.525 | 3.18 | 0.4 | | 4 | | | | | | | | | | | | | | |
| | | | 160308 | 322 | 9.525 | 3.18 | 0.8 | | 3.7 | | | | | | | | | | | | | | |
| | MT | TPGN 110302 | TPGN 22(0.5) | 6.35 | 3.18 | 0.2 | | 2.6 | | | | | | | | | | | | | | | |
| | | | 110304 | 221 | 6.35 | 3.18 | 0.4 | | 2.5 | | | | | | | | | | | | | | |
| | | | 110308 | 222 | 6.35 | 3.18 | 0.8 | | 2.2 | | | | | | | | | | | | | | |
| | | | 160302 | 32(0.5) | 9.525 | 3.18 | 0.2 | | 2.6 | | | | | | | | | | | | | | |
| | | | 160304 | 321 | 9.525 | 3.18 | 0.4 | | 2.5 | | | | | | | | | | | | | | |
| | | | 160308 | 322 | 9.525 | 3.18 | 0.8 | | 2.2 | | | | | | | | | | | | | | |
| | Chip breaker | TPGN 110302 | TPGN 22(0.5) | 6.35 | 3.18 | 0.2 | | 4.1 | | | | | | | | | | | | | | | |
| | | | 110304 | 221 | 6.35 | 3.18 | 0.4 | | 4 | | | | | | | | | | | | | | |
| | | | 110308 | 222 | 6.35 | 3.18 | 0.8 | | 3.7 | | | | | | | | | | | | | | |
| | | | 160302 | 32(0.5) | 9.525 | 3.18 | 0.2 | | 4.1 | | | | | | | | | | | | | | |
| | | | 160304 | 321 | 9.525 | 3.18 | 0.4 | | 4 | | | | | | | | | | | | | | |
| | | | 160308 | 322 | 9.525 | 3.18 | 0.8 | | 3.7 | | | | | | | | | | | | | | |

■ MT : Mini Tip Chip breaker type : Rough / Finish / Semi Finish

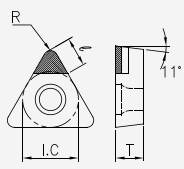
| TPGN (L) | | | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | | | | CVD | | | |
|----------|----------|---------------|------------|-------|-----------------|------|-----|------|---|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|
| | | | Metric | Inch | I.C | T | R | Hole | φ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | |
| | Standard | TPGN 160304 L | TPGN 331 L | 9.525 | 3.18 | 0.4 | | | | | | | | | | | | | | | | | |
| | | | 160308 L | 332 L | 9.525 | 3.18 | 0.8 | | | | | | | | | | | | | | | | |
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| TPGN (R) | | | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | | | | CVD | | | |
|----------|----------|---------------|------------|-------|-----------------|------|-----|------|---|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|
| | | | Metric | Inch | I.C | T | R | Hole | φ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | |
| | Standard | TPGN 160304 R | TPGN 331 R | 9.525 | 3.18 | 0.4 | | | | | | | | | | | | | | | | | |
| | | | 160308 R | 332 R | 9.525 | 3.18 | 0.8 | | | | | | | | | | | | | | | | |
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TPGW

POSITIVE 11 _ hole

| TPGW | ISO code | | Dimensions (mm) | | | | | | PCD | | | | | | | | | | CVD | |
|--------------|-------------|------------------|-----------------|------|-----|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | |
| | | | | | | | | | | | | | | | | | | | | |
| Standard | TPGW 110202 | TPGW 210.5 | 6.35 | 2.38 | 0.2 | 2.8 | 4.1 | | | | | | | | | | | | | |
| | 110204 | 211 | 6.35 | 2.38 | 0.4 | 2.8 | 4 | | | | | | | | | | | | | |
| | 110304 | 221 | 6.35 | 3.18 | 0.4 | 3.4 | 4 | | | | | | | | | | | | | |
| | 110308 | 222 | 6.35 | 3.18 | 0.8 | 3.4 | 3.7 | | | | | | | | | | | | | |
| | 160302 | 32(0.5) | 9.525 | 3.18 | 0.2 | 4.4 | 4.1 | | | | | | | | | | | | | |
| | 160304 | 321 | 9.525 | 3.18 | 0.4 | 4.4 | 4 | | | | | | | | | | | | | |
| | 160308 | 322 | 9.525 | 3.18 | 0.8 | 4.4 | 3.7 | | | | | | | | | | | | | |
| | 160404 | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 4 | | | | | | | | | | | | | |
| | 160408 | 332 | 9.525 | 4.76 | 0.8 | 4.4 | 3.7 | | | | | | | | | | | | | |
| MT | TPGW 080202 | TPGW 1.5(1.5)0.5 | 4.76 | 2.38 | 0.2 | 2.3 | 2.6 | | | | | | | | | | | | | |
| | 080204 | 1.5(1.5)1 | 4.76 | 2.38 | 0.4 | 2.3 | 2.5 | | | | | | | | | | | | | |
| | 110202 | 210.5 | 6.35 | 2.38 | 0.2 | 2.8 | 2.6 | | | | | | | | | | | | | |
| | 110204 | 211 | 6.35 | 2.38 | 0.4 | 2.8 | 2.5 | | | | | | | | | | | | | |
| | 110304 | 221 | 6.35 | 3.18 | 0.4 | 3.4 | 2.5 | | | | | | | | | | | | | |
| | 110308 | 222 | 6.35 | 3.18 | 0.8 | 3.4 | 2.2 | | | | | | | | | | | | | |
| | 160302 | 32(0.5) | 9.525 | 3.18 | 0.2 | 4.4 | 2.6 | | | | | | | | | | | | | |
| | 160304 | 321 | 9.525 | 3.18 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | | | |
| | 160308 | 322 | 9.525 | 3.18 | 0.8 | 4.4 | 2.2 | | | | | | | | | | | | | |
| Chip breaker | TPGW 080202 | TPGW 1.5(1.5)0.5 | 4.76 | 2.38 | 0.2 | 2.3 | 2.6 | | | | | | | | | | | | | |
| | 080204 | 1.5(1.5)1 | 4.76 | 2.38 | 0.4 | 2.3 | 2.5 | | | | | | | | | | | | | |
| | 110202 | 210.5 | 6.35 | 2.38 | 0.2 | 2.8 | 4.1 | | | | | | | | | | | | | |
| | 110204 | 211 | 6.35 | 2.38 | 0.4 | 2.8 | 4 | | | | | | | | | | | | | |
| | 110304 | 221 | 6.35 | 3.18 | 0.4 | 3.4 | 4 | | | | | | | | | | | | | |
| | 110308 | 222 | 6.35 | 3.18 | 0.8 | 3.4 | 3.7 | | | | | | | | | | | | | |
| | 160302 | 32(0.5) | 9.525 | 3.18 | 0.2 | 4.4 | 4.1 | | | | | | | | | | | | | |
| | 160304 | 321 | 9.525 | 3.18 | 0.4 | 4.4 | 4 | | | | | | | | | | | | | |
| | 160308 | 322 | 9.525 | 3.18 | 0.8 | 4.4 | 3.7 | | | | | | | | | | | | | |
| 160404 | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 4 | | | | | | | | | | | | | | |
| 160408 | 332 | 9.525 | 4.76 | 0.8 | 4.4 | 3.7 | | | | | | | | | | | | | | |

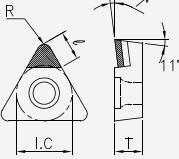


■ MT : Mini Tip Chip breaker type : Rough / Finish / Semi Finish

Holder : 116p

TPGT

POSITIVE 11 _ hole

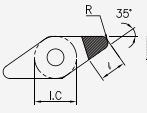
| TPGT | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | | | CVD | | | | | | | | |
|---|----------|------|-----------------|------|-------------|------|------|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|--|--|--|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | Standard | TPGT | 110202 | TPGT | 210.5 | 6.35 | 2.38 | 0.2 | 2.8 | 4.1 | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | MT | TPGT | 080202 | TPGT | 1.5(1.5)0.5 | 4.76 | 2.38 | 0.2 | 2.3 | 2.6 | | | | | | | | | | | | | | | |
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■ MT : Mini Tip

Holder : 116p

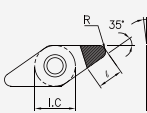
VN

NEGATIVE _ hole

| VNGA | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | | | CVD | | | | | | | |
|---|--------------|------|-----------------|------|---------|-------|------|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|--|--|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
|  | Standard | VNGA | 160402 | VNGA | 33(0.5) | 9.525 | 4.76 | 0.2 | 3.81 | 5 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | MT | VNGA | 160402 | VNGA | 33(0.5) | 9.525 | 4.76 | 0.2 | 3.81 | 3 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | Chip breaker | VNGA | 160402 | VNGA | 33(0.5) | 9.525 | 4.76 | 0.2 | 3.81 | 5 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |

■ MT : Mini Tip Chip breaker type : Rough / Finish / Semi Finish

Holder : 78p, 87p, 111p

| VNGX | ISO code | | Dimensions (mm) | | | | | PCD | | | | | | | | | CVD | | | | | | | |
|---|----------|------|-----------------|------|---------|-------|------|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|--|--|--|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
|  | Standard | VNGX | 160402 | VNGX | 33(0.5) | 9.525 | 4.76 | 0.2 | 3.81 | 5 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | MT | VNGX | 160402 | VNGX | 33(0.5) | 9.525 | 4.76 | 0.2 | 3.81 | 3 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |

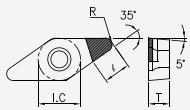
■ MT : Mini Tip

Holder : 78p, 87p, 111p

VB

POSITIVE 5 _ hole

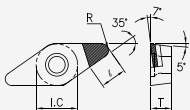
| VBGW | ISO code | | Dimensions (mm) | | | | | | PCD | | | | | | | | | | CVD | |
|--------------|----------|--------|-----------------|---------|-------|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | |
| | | | | | | | | | | | | | | | | | | | | |
| Standard | VBGW | 110302 | VBGW | 220.5 | 6.35 | 3.18 | 0.2 | 2.8 | 5 | | | | | | | | | | | |
| | | 110304 | | 221 | 6.35 | 3.18 | 0.4 | 2.8 | 4.5 | | | | | | | | | | | |
| | | 110308 | | 222 | 6.35 | 3.18 | 0.8 | 2.8 | 3.7 | | | | | | | | | | | |
| | | 160402 | | 32(0.5) | 9.525 | 4.76 | 0.2 | 4.4 | 5 | | | | | | | | | | | |
| | | 160404 | | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 4.5 | | | | | | | | | | | |
| | | 160408 | | 332 | 9.525 | 4.76 | 0.8 | 4.4 | 3.7 | | | | | | | | | | | |
| | | 160412 | | 333 | 9.525 | 4.76 | 1.2 | 4.4 | 3.3 | | | | | | | | | | | |
| MT | VBGW | 110302 | VBGW | 220.5 | 6.35 | 3.18 | 0.2 | 2.8 | 3 | | | | | | | | | | | |
| | | 110304 | | 221 | 6.35 | 3.18 | 0.4 | 2.8 | 2.5 | | | | | | | | | | | |
| | | 110308 | | 222 | 6.35 | 3.18 | 0.8 | 2.8 | 2.2 | | | | | | | | | | | |
| | | 160402 | | 32(0.5) | 9.525 | 4.76 | 0.2 | 4.4 | 3 | | | | | | | | | | | |
| | | 160404 | | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | |
| | | 160408 | | 332 | 9.525 | 4.76 | 0.8 | 4.4 | 2.2 | | | | | | | | | | | |
| | | 160412 | | 333 | 9.525 | 4.76 | 1.2 | 4.4 | 1.8 | | | | | | | | | | | |
| Chip breaker | VBGW | 110302 | VBGW | 220.5 | 6.35 | 3.18 | 0.2 | 2.8 | 5 | | | | | | | | | | | |
| | | 110304 | | 221 | 6.35 | 3.18 | 0.4 | 2.8 | 4.5 | | | | | | | | | | | |
| | | 110308 | | 222 | 6.35 | 3.18 | 0.8 | 2.8 | 3.7 | | | | | | | | | | | |
| | | 160402 | | 32(0.5) | 9.525 | 4.76 | 0.2 | 4.4 | 5 | | | | | | | | | | | |
| | | 160404 | | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 4.5 | | | | | | | | | | | |
| | | 160408 | | 332 | 9.525 | 4.76 | 0.8 | 4.4 | 3.7 | | | | | | | | | | | |
| | | 160412 | | 333 | 9.525 | 4.76 | 1.2 | 4.4 | 3.3 | | | | | | | | | | | |



■ MT : Mini Tip Chip breaker type : Rough / Finish / Semi Finish

Holder : 93p, 94p, 117p

| VBGT | ISO code | | Dimensions (mm) | | | | | | PCD | | | | | | | | | | CVD | |
|----------|----------|--------|-----------------|---------|-------|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | |
| | | | | | | | | | | | | | | | | | | | | |
| Standard | VBGT | 110302 | VBGT | 220.5 | 6.35 | 3.18 | 0.2 | 2.8 | 5 | | | | | | | | | | | |
| | | 110304 | | 221 | 6.35 | 3.18 | 0.4 | 2.8 | 4.5 | | | | | | | | | | | |
| | | 110308 | | 222 | 6.35 | 3.18 | 0.8 | 2.8 | 3.7 | | | | | | | | | | | |
| | | 160402 | | 32(0.5) | 9.525 | 4.76 | 0.2 | 4.4 | 5 | | | | | | | | | | | |
| | | 160404 | | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 4.5 | | | | | | | | | | | |
| | | 160408 | | 332 | 9.525 | 4.76 | 0.8 | 4.4 | 3.7 | | | | | | | | | | | |
| | | 160412 | | 333 | 9.525 | 4.76 | 1.2 | 4.4 | 3.3 | | | | | | | | | | | |
| MT | VBGT | 110302 | VBGT | 220.5 | 6.35 | 3.18 | 0.2 | 2.8 | 3 | | | | | | | | | | | |
| | | 110304 | | 221 | 6.35 | 3.18 | 0.4 | 2.8 | 2.5 | | | | | | | | | | | |
| | | 110308 | | 222 | 6.35 | 3.18 | 0.8 | 2.8 | 2.2 | | | | | | | | | | | |
| | | 160402 | | 32(0.5) | 9.525 | 4.76 | 0.2 | 4.4 | 3 | | | | | | | | | | | |
| | | 160404 | | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | |
| | | 160408 | | 332 | 9.525 | 4.76 | 0.8 | 4.4 | 2.2 | | | | | | | | | | | |
| | | 160412 | | 333 | 9.525 | 4.76 | 1.2 | 4.4 | 1.8 | | | | | | | | | | | |



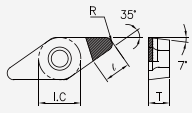
■ MT : Mini Tip

Holder : 93p, 94p, 117p

VC
POSITIVE 7 _ hole

Turning

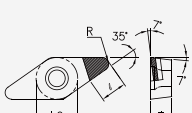
| VCGW | ISO code | | Dimensions (mm) | | | | | | PCD | | | | | | | | | | CVD | |
|--------------|----------|--------|-----------------|---------|-------|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | |
| | | | | | | | | | | | | | | | | | | | | |
| Standard | VCGW | 110302 | VCGW | 220.5 | 6.35 | 3.18 | 0.2 | 2.8 | 5 | | | | | | | | | | | |
| | | 110304 | | 221 | 6.35 | 3.18 | 0.4 | 2.8 | 4.5 | | | | | | | | | | | |
| | | 110308 | | 222 | 6.35 | 3.18 | 0.8 | 2.8 | 3.7 | | | | | | | | | | | |
| | | 160402 | | 32(0.5) | 9.525 | 4.76 | 0.2 | 4.4 | 5 | | | | | | | | | | | |
| | | 160404 | | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 4.5 | | | | | | | | | | | |
| | | 160408 | | 332 | 9.525 | 4.76 | 0.8 | 4.4 | 3.7 | | | | | | | | | | | |
| | | 160412 | | 333 | 9.525 | 4.76 | 1.2 | 4.4 | 3.3 | | | | | | | | | | | |
| | | 220512 | | 4(3.5)3 | 12.7 | 5.56 | 1.2 | 5.5 | 3.3 | | | | | | | | | | | |
| MT | VCGW | 110302 | VCGW | 220.5 | 6.35 | 3.18 | 0.2 | 2.8 | 3 | | | | | | | | | | | |
| | | 110304 | | 221 | 6.35 | 3.18 | 0.4 | 2.8 | 2.5 | | | | | | | | | | | |
| | | 110308 | | 222 | 6.35 | 3.18 | 0.8 | 2.8 | 2.2 | | | | | | | | | | | |
| | | 160402 | | 32(0.5) | 9.525 | 4.76 | 0.2 | 4.4 | 3 | | | | | | | | | | | |
| | | 160404 | | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | |
| | | 160408 | | 332 | 9.525 | 4.76 | 0.8 | 4.4 | 2.2 | | | | | | | | | | | |
| | | 160412 | | 333 | 9.525 | 4.76 | 1.2 | 4.4 | 1.8 | | | | | | | | | | | |
| | | 220512 | | 4(3.5)3 | 12.7 | 5.56 | 1.2 | 5.5 | 3.3 | | | | | | | | | | | |
| Chip breaker | VCGW | 110302 | VCGW | 220.5 | 6.35 | 3.18 | 0.2 | 2.8 | 5 | | | | | | | | | | | |
| | | 110304 | | 221 | 6.35 | 3.18 | 0.4 | 2.8 | 4.5 | | | | | | | | | | | |
| | | 110308 | | 222 | 6.35 | 3.18 | 0.8 | 2.8 | 3.7 | | | | | | | | | | | |
| | | 160402 | | 32(0.5) | 9.525 | 4.76 | 0.2 | 4.4 | 5 | | | | | | | | | | | |
| | | 160404 | | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 4.5 | | | | | | | | | | | |
| | | 160412 | | 333 | 9.525 | 4.76 | 1.2 | 4.4 | 3.3 | | | | | | | | | | | |



■ MT : Mini Tip Chip breaker type : Rough / Finish / Semi Finish

Holder : 95p, 116p, 117p, 118p

| VCGT | ISO code | | Dimensions (mm) | | | | | | PCD | | | | | | | | | | CVD | |
|----------|----------|--------|-----------------|---------|-------|------|-----|------|------|------|------|------|-------|------|------|------|------|-------|-------|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | ED501 | ED502 | |
| | | | | | | | | | | | | | | | | | | | | |
| Standard | VCGT | 110302 | VCGT | 220.5 | 6.35 | 3.18 | 0.2 | 2.8 | 5 | | | | | | | | | | | |
| | | 110304 | | 221 | 6.35 | 3.18 | 0.4 | 2.8 | 4.5 | | | | | | | | | | | |
| | | 110308 | | 222 | 6.35 | 3.18 | 0.8 | 2.8 | 3.7 | | | | | | | | | | | |
| | | 160402 | | 32(0.5) | 9.525 | 4.76 | 0.2 | 4.4 | 5 | | | | | | | | | | | |
| | | 160404 | | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 4.5 | | | | | | | | | | | |
| | | 160408 | | 332 | 9.525 | 4.76 | 0.8 | 4.4 | 3.7 | | | | | | | | | | | |
| | | 160412 | | 333 | 9.525 | 4.76 | 1.2 | 4.4 | 3.3 | | | | | | | | | | | |
| | | 220512 | | 4(3.5)3 | 12.7 | 5.56 | 1.2 | 5.5 | 3.3 | | | | | | | | | | | |
| MT | VCGT | 110302 | VCGT | 220.5 | 6.35 | 3.18 | 0.2 | 2.8 | 3 | | | | | | | | | | | |
| | | 110304 | | 221 | 6.35 | 3.18 | 0.4 | 2.8 | 2.5 | | | | | | | | | | | |
| | | 110308 | | 222 | 6.35 | 3.18 | 0.8 | 2.8 | 2.2 | | | | | | | | | | | |
| | | 160402 | | 32(0.5) | 9.525 | 4.76 | 0.2 | 4.4 | 3 | | | | | | | | | | | |
| | | 160404 | | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | |
| | | 160412 | | 333 | 9.525 | 4.76 | 1.2 | 4.4 | 1.8 | | | | | | | | | | | |

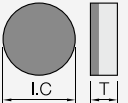


■ MT : Mini Tip

Holder : 95p, 116p, 117p, 118p

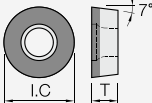
RNGN

NEGATIVE

| RNGN | ISO code | | Dimensions (mm) | | | | PCD | | | | | | | | | | | |
|---|----------|-------------|-----------------|--------|------|------|------|------|------|------|------|-------|------|------|------|------|--|--|
| | Metric | Inch | I.C | T | R | Hole | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | | |
|  | Standard | RNGN 090300 | RNGN 320 | 9.525 | 3.18 | | | | | | | | | | | | | |
| | | 090400 | 330 | 9.525 | 4.76 | | | | | | | | | | | | | |
| | | 120300 | 420 | 12.7 | 3.18 | | | | | | | | | | | | | |
| | | 120400 | 430 | 12.7 | 4.76 | | | | | | | | | | | | | |
| | | 150400 | 530 | 15.875 | 4.76 | | | | | | | | | | | | | |

RCGW

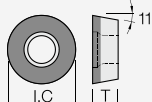
POSITIVE 7 _ hole

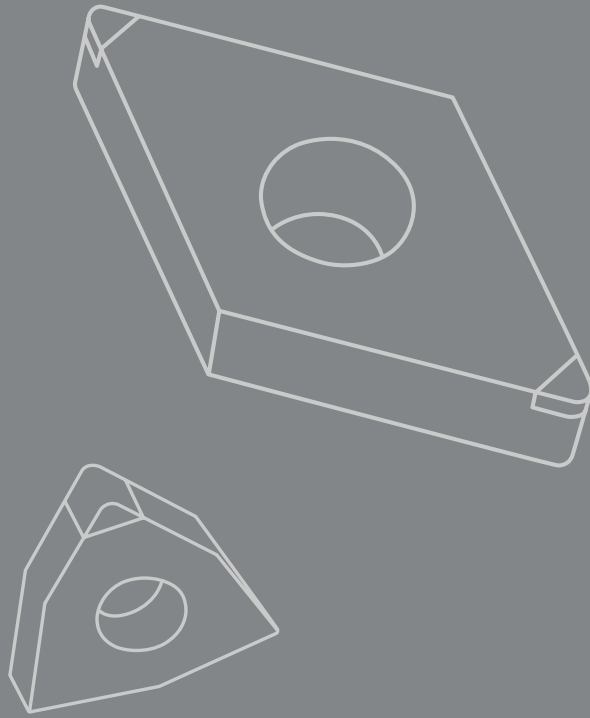
| RCGW | ISO code | | Dimensions (mm) | | | | PCD | | | | | | | | | | | |
|--|----------|-------------|-----------------|------|------|------|------|------|------|------|------|-------|------|------|------|------|--|--|
| | Metric | Inch | I.C | T | R | Hole | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | | |
|  | Standard | RCGW 060200 | RCGW 21.5 | 6.35 | 2.38 | 2.8 | | | | | | | | | | | | |
| | | 080300 | - | 8.0 | 3.18 | 3.4 | | | | | | | | | | | | |
| | | 10T300 | - | 10 | 3.18 | 4.4 | | | | | | | | | | | | |
| | | 12T300 | 42.5 | 12.7 | 3.97 | 4.4 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |

Holder : 90p

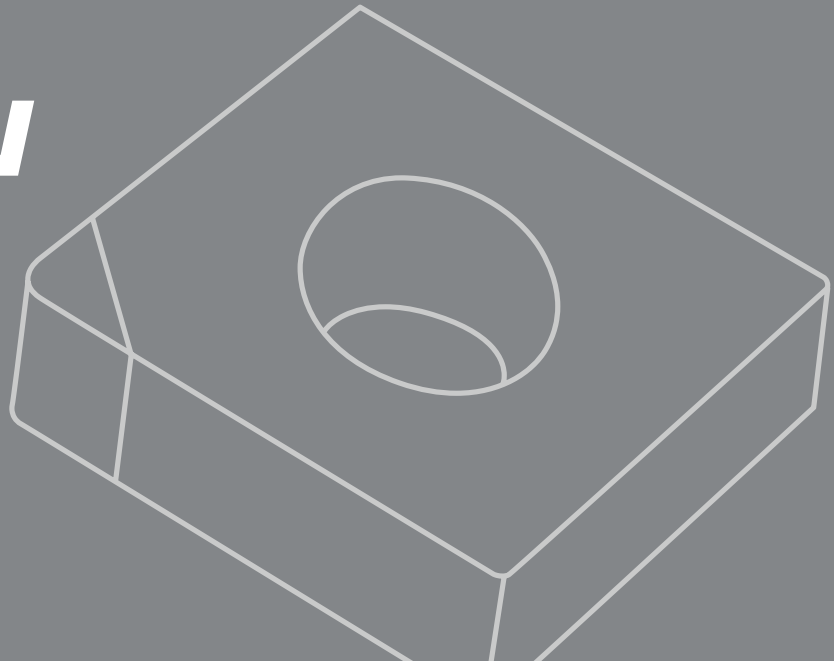
RPGW

POSITIVE 11 _ hole

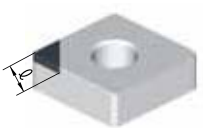
| RPGW | ISO code | | Dimensions (mm) | | | | PCD | | | | | | | | | | | |
|---|----------|-------------|-----------------|------|------|------|------|------|------|------|------|-------|------|------|------|------|--|--|
| | Metric | Inch | I.C | T | R | Hole | EP10 | EP20 | EP13 | EP51 | EP55 | EP750 | EP58 | EP59 | EP29 | EP69 | | |
|  | Standard | RPGW 060200 | RPGW 21.5 | 6.35 | 2.38 | 2.8 | | | | | | | | | | | | |
| | | 080300 | - | 8.0 | 3.18 | 3.4 | | | | | | | | | | | | |
| | | 10T300 | - | 10 | 3.18 | 4.4 | | | | | | | | | | | | |
| | | 12T300 | 42.5 | 12.7 | 3.97 | 4.4 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |



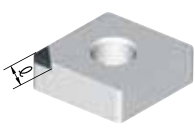
Turning_
PCBN



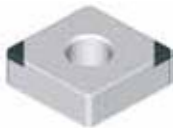
Insert tip types



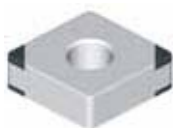
Standard



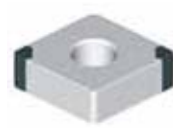
Mini tip



Mini 2tips



Mini 4tips



Vertical tip



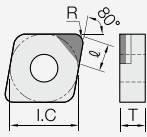
Solid

CNGA

NEGATIVE _ hole



| CNGA | ISO code | | Dimensions (mm) | | | | | | PCBN | | | | | | | | | | | | | |
|-----------|-------------|--------------|-----------------|------|-----|------|-----|-----------|-----------|-------|-----------|-------|-----------|-------|-------|------|-------|------|-------|-------|--------|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EB28X (S) | EB570 (S) | EB160 | EB560 (S) | EB150 | EB550 (S) | EB190 | EB170 | EB73 | EB54X | EB51 | EB710 | EB210 | EB100X | |
| Standard | CNGA 120402 | CNGA 43(0.5) | 12.7 | 4.76 | 0.2 | 5.16 | 4.3 | | | | | | | | | | | | | | | |
| | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 4.3 | | | | | | | | | | | | | | | |
| | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 4.2 | | | | | | | | | | | | | | | |
| | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 4.1 | | | | | | | | | | | | | | | |
| MT | CNGA 120402 | CNGA 43(0.5) | 12.7 | 4.76 | 0.2 | 5.16 | 2.8 | | | | | | | | | | | | | | | |
| | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.8 | | | | | | | | | | | | | | | |
| | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2.7 | | | | | | | | | | | | | | | |
| | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 3.1 | | | | | | | | | | | | | | | |
| 2MT | CNGA 120402 | CNGA 43(0.5) | 12.7 | 4.76 | 0.2 | 5.16 | 2.8 | | | | | | | | | | | | | | | |
| | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.8 | | | | | | | | | | | | | | | |
| | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2.7 | | | | | | | | | | | | | | | |
| | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 3.1 | | | | | | | | | | | | | | | |
| 4MT | CNGA 120402 | CNGA 43(0.5) | 12.7 | 4.76 | 0.2 | 5.16 | 2.8 | | | | | | | | | | | | | | | |
| | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.8 | | | | | | | | | | | | | | | |
| | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2.7 | | | | | | | | | | | | | | | |
| | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 3.1 | | | | | | | | | | | | | | | |
| 4VT solid | CNGA 120402 | CNGA 43(0.5) | 12.7 | 4.76 | 0.2 | 5.16 | 2.7 | | | | | | | | | | | | | | | |
| | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.6 | | | | | | | | | | | | | | | |
| | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2.5 | | | | | | | | | | | | | | | |
| | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 2.5 | | | | | | | | | | | | | | | |



■ MT : Mini Tip 2MT : Mini 2Tips 4MT : Mini 4Tips 4VT : Vertical 4Tips

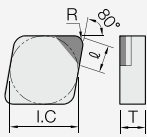
Holder : 75p, 79p, 82p, 83p, 108p, 119p

CNGN

NEGATIVE

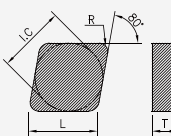


| CNGN | ISO code | | Dimensions (mm) | | | | | | PCBN | | | | | | | | | | | | | |
|----------|-------------|----------|-----------------|------|-----|------|-----|-----------|-----------|-------|-----------|-------|-----------|-------|-------|------|-------|------|-------|-------|--------|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EB28X (S) | EB570 (S) | EB160 | EB560 (S) | EB150 | EB550 (S) | EB190 | EB170 | EB73 | EB54X | EB51 | EB710 | EB210 | EB100X | |
| Standard | CNGN 120408 | CNGN 432 | 12.7 | 4.76 | 0.8 | | 4.2 | | | | | | | | | | | | | | | |
| | 120412 | 433 | 12.7 | 4.76 | 1.2 | | 4.1 | | | | | | | | | | | | | | | |



■ Solid

| CNGN | ISO code | | Dimensions (mm) | | | | | | PCBN | | | | | | |
|-------|-------------|----------|-----------------|------|-----|------|---|--------|------|--------|-----|-------|-------|-------|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EB1000 | EB50 | EB100X | HBN | HBN-T | HBN-W | HBN-N | |
| Solid | CNGN 120408 | CNGN 432 | 12.7 | 4.76 | 0.8 | | | | | | | | | | |
| | 120412 | 433 | 12.7 | 4.76 | 1.2 | | | | | | | | | | |

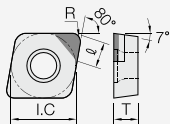


CCGW

POSITIVE 7 _ hole



| CCGW | ISO code | | Dimensions (mm) | | | | | PCBN | | | | | | | | | | | | | | | |
|----------|-------------|----------------|-----------------|------|------|------|-----|-----------|-----------|-------|-----------|-------|-----------|-------|-------|------|-------|------|-------|-------|--------|--|--|
| | Metric | Inch | I.C | T | R | Hole | φ | EB28X (S) | EB570 (S) | EB160 | EB560 (S) | EB150 | EB550 (S) | EB190 | EB170 | EB73 | EB54X | EB51 | EB710 | EB210 | EB100X | | |
| Standard | CCGW 060208 | CCGW 2(1.5)2 | 6.35 | 2.38 | 0.8 | 2.8 | 3.2 | | | | | | | | | | | | | | | | |
| | 09T302 | 3(2.5)0.5 | 9.525 | 3.97 | 0.2 | 4.4 | 4.3 | | | | | | | | | | | | | | | | |
| | 09T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 4.3 | | | | | | | | | | | | | | | | |
| | 09T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 4.2 | | | | | | | | | | | | | | | | |
| | 120402 | 430 | 12.7 | 4.76 | 0.2 | 5.5 | 4.3 | | | | | | | | | | | | | | | | |
| | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.5 | 4.3 | | | | | | | | | | | | | | | | |
| | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.5 | 4.2 | | | | | | | | | | | | | | | | |
| | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.5 | 4.1 | | | | | | | | | | | | | | | | |
| MT | CCGW 060202 | CCGW 2(1.5)0.5 | 6.35 | 2.38 | 0.2 | 2.8 | 2.8 | | | | | | | | | | | | | | | | |
| | 060204 | 2(1.5)1 | 6.35 | 2.38 | 0.4 | 2.8 | 2.8 | | | | | | | | | | | | | | | | |
| | 060208 | 2(1.5)2 | 6.35 | 2.38 | 0.8 | 2.8 | 2.7 | | | | | | | | | | | | | | | | |
| | 09T302 | 3(2.5)0.5 | 9.525 | 3.97 | 0.2 | 4.4 | 2.8 | | | | | | | | | | | | | | | | |
| | 09T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 2.8 | | | | | | | | | | | | | | | | |
| | 09T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 2.7 | | | | | | | | | | | | | | | | |
| | 120402 | 430 | 12.7 | 4.76 | 0.2 | 5.5 | 2.8 | | | | | | | | | | | | | | | | |
| | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.5 | 2.8 | | | | | | | | | | | | | | | | |
| | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.5 | 2.7 | | | | | | | | | | | | | | | | |
| | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.5 | 3.1 | | | | | | | | | | | | | | | | |
| | 2MT | CCGW 060202 | CCGW 2(1.5)0.5 | 6.35 | 2.38 | 0.2 | 2.8 | 2.8 | | | | | | | | | | | | | | | |
| | | 060204 | 2(1.5)1 | 6.35 | 2.38 | 0.4 | 2.8 | 2.8 | | | | | | | | | | | | | | | |
| 060208 | | 2(1.5)2 | 6.35 | 2.38 | 0.8 | 2.8 | 2.7 | | | | | | | | | | | | | | | | |
| 09T302 | | 3(2.5)0.5 | 9.525 | 3.97 | 0.2 | 4.4 | 2.8 | | | | | | | | | | | | | | | | |
| 09T304 | | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 2.8 | | | | | | | | | | | | | | | | |
| 09T308 | | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 2.7 | | | | | | | | | | | | | | | | |
| 120402 | | 430 | 12.7 | 4.76 | 0.2 | 5.5 | 2.8 | | | | | | | | | | | | | | | | |
| 120404 | | 431 | 12.7 | 4.76 | 0.4 | 5.5 | 2.8 | | | | | | | | | | | | | | | | |
| 120408 | | 432 | 12.7 | 4.76 | 0.8 | 5.5 | 2.7 | | | | | | | | | | | | | | | | |
| 120412 | | 433 | 12.7 | 4.76 | 1.2 | 5.5 | 3.1 | | | | | | | | | | | | | | | | |



■ MT : Mini Tips 2MT : Mini 2Tips

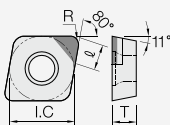
Holder : 88p, 112p

CPGW

POSITIVE 11 _ hole



| CPGW | ISO code | | Dimensions (mm) | | | | | PCBN | | | | | | | | | | | | | | |
|----------|-------------|------------------|-----------------|------|-----|------|-----|-----------|-----------|-------|-----------|-------|-----------|-------|-------|------|-------|------|-------|-------|--------|--|
| | Metric | Inch | I.C | T | R | Hole | φ | EB28X (S) | EB570 (S) | EB160 | EB560 (S) | EB150 | EB550 (S) | EB190 | EB170 | EB73 | EB54X | EB51 | EB710 | EB210 | EB100X | |
| Standard | CPGW 090302 | CPGW 320.5 | 9.525 | 3.18 | 0.2 | 4.4 | 4.3 | | | | | | | | | | | | | | | |
| | 090304 | 321 | 9.525 | 3.18 | 0.4 | 4.4 | 4.3 | | | | | | | | | | | | | | | |
| | 090308 | 322 | 9.525 | 3.18 | 0.8 | 4.4 | 4.2 | | | | | | | | | | | | | | | |
| MT | CPGW 080202 | CPGW 2.5(1.5)0.5 | 7.94 | 2.38 | 0.2 | 3.4 | 2.8 | | | | | | | | | | | | | | | |
| | 080204 | 2.5(1.5)1 | 7.94 | 2.38 | 0.4 | 3.4 | 2.8 | | | | | | | | | | | | | | | |
| | 090302 | 320.5 | 9.525 | 3.18 | 0.2 | 4.4 | 2.8 | | | | | | | | | | | | | | | |
| | 090304 | 321 | 9.525 | 3.18 | 0.4 | 4.4 | 2.8 | | | | | | | | | | | | | | | |
| | 090308 | 322 | 9.525 | 3.18 | 0.8 | 4.4 | 2.7 | | | | | | | | | | | | | | | |
| | CPGW 080202 | CPGW 2.5(1.5)0.5 | 7.94 | 2.38 | 0.2 | 3.4 | 2.8 | | | | | | | | | | | | | | | |
| 2MT | 080204 | 2.5(1.5)1 | 7.94 | 2.38 | 0.4 | 3.4 | 2.8 | | | | | | | | | | | | | | | |
| | 090302 | 320.5 | 9.525 | 3.18 | 0.2 | 4.4 | 2.8 | | | | | | | | | | | | | | | |
| | 090304 | 321 | 9.525 | 3.18 | 0.4 | 4.4 | 2.8 | | | | | | | | | | | | | | | |
| | 090308 | 322 | 9.525 | 3.18 | 0.8 | 4.4 | 2.7 | | | | | | | | | | | | | | | |



■ MT : Mini Tips 2MT : Mini 2Tips

Holder : 112p

DNGA

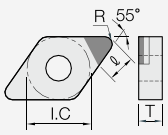
NEGATIVE _ hole



| DNGA | ISO code | | Dimensions (mm) | | | | | | PCBN | | | | | | | | | | | | | |
|-----------|----------|--------|-----------------|-----|-------|------|-----|-----------|-----------|-------|-----------|-------|-----------|-------|-------|------|-------|------|-------|-------|--------|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EB28X (S) | EB570 (S) | EB160 | EB560 (S) | EB150 | EB550 (S) | EB190 | EB170 | EB73 | EB54X | EB51 | EB710 | EB210 | EB100X | |
| Standard | DNGA | 110404 | DNGA | 331 | 9.525 | 4.76 | 0.4 | 3.81 | 3.9 | | | | | | | | | | | | | |
| | | 110408 | | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 3.5 | | | | | | | | | | | | | |
| | | 150404 | | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 3.9 | | | | | | | | | | | | | |
| | | 150408 | | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 3.5 | | | | | | | | | | | | | |
| | | 150412 | | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 3.1 | | | | | | | | | | | | | |
| | | 150604 | | 441 | 12.7 | 6.35 | 0.4 | 5.16 | 3.9 | | | | | | | | | | | | | |
| | | 150608 | | 442 | 12.7 | 6.35 | 0.8 | 5.16 | 3.5 | | | | | | | | | | | | | |
| | | 150612 | | 443 | 12.7 | 6.35 | 1.2 | 5.16 | 3.1 | | | | | | | | | | | | | |
| MT | DNGA | 110404 | DNGA | 331 | 9.525 | 4.76 | 0.4 | 3.81 | 2.4 | | | | | | | | | | | | | |
| | | 110408 | | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 2 | | | | | | | | | | | | | |
| | | 150404 | | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.4 | | | | | | | | | | | | | |
| | | 150408 | | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2 | | | | | | | | | | | | | |
| | | 150412 | | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 2.1 | | | | | | | | | | | | | |
| | | 150604 | | 441 | 12.7 | 6.35 | 0.4 | 5.16 | 2.4 | | | | | | | | | | | | | |
| | | 150608 | | 442 | 12.7 | 6.35 | 0.8 | 5.16 | 2 | | | | | | | | | | | | | |
| | | 150612 | | 443 | 12.7 | 6.35 | 1.2 | 5.16 | 2.1 | | | | | | | | | | | | | |
| 2MT | DNGA | 110404 | DNGA | 331 | 9.525 | 4.76 | 0.4 | 3.81 | 2.4 | | | | | | | | | | | | | |
| | | 110408 | | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 2 | | | | | | | | | | | | | |
| | | 150404 | | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.4 | | | | | | | | | | | | | |
| | | 150408 | | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2 | | | | | | | | | | | | | |
| | | 150412 | | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 2.1 | | | | | | | | | | | | | |
| | | 150604 | | 441 | 12.7 | 6.35 | 0.4 | 5.16 | 2.4 | | | | | | | | | | | | | |
| | | 150608 | | 442 | 12.7 | 6.35 | 0.8 | 5.16 | 2 | | | | | | | | | | | | | |
| | | 150612 | | 443 | 12.7 | 6.35 | 1.2 | 5.16 | 2.1 | | | | | | | | | | | | | |
| 4MT | DNGA | 110404 | DNGA | 331 | 9.525 | 4.76 | 0.4 | 3.81 | 2.4 | | | | | | | | | | | | | |
| | | 110408 | | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 2 | | | | | | | | | | | | | |
| | | 150404 | | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.4 | | | | | | | | | | | | | |
| | | 150408 | | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2 | | | | | | | | | | | | | |
| | | 150412 | | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 2.1 | | | | | | | | | | | | | |
| | | 150604 | | 441 | 12.7 | 6.35 | 0.4 | 5.16 | 2.4 | | | | | | | | | | | | | |
| | | 150608 | | 442 | 12.7 | 6.35 | 0.8 | 5.16 | 2 | | | | | | | | | | | | | |
| | | 150612 | | 443 | 12.7 | 6.35 | 1.2 | 5.16 | 2.1 | | | | | | | | | | | | | |
| 4VT solid | DNGA | 110404 | DNGA | 331 | 9.525 | 4.76 | 0.4 | 3.81 | 2.7 | | | | | | | | | | | | | |
| | | 110408 | | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 2.3 | | | | | | | | | | | | | |
| | | 150404 | | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.7 | | | | | | | | | | | | | |
| | | 150408 | | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2.3 | | | | | | | | | | | | | |
| | | 150412 | | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 2 | | | | | | | | | | | | | |

■ MT : Mini Tips 2MT : Mini 2Tips 4MT : Mini 4Tips 4VT : Vertical 4Tips

▣ Holder : 75p, 79p, 80p, 83p, 84p, 108p, 109p

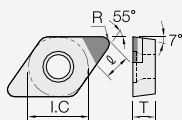


DCGW

POSITIVE 7 _ hole



| DCGW | ISO code | | Dimensions (mm) | | | | | | PCBN | | | | | | | | | | | | | |
|----------|-------------|----------------|-----------------|------|-----|------|-----|-----------|-----------|-------|-----------|-------|-----------|-------|-------|------|-------|------|-------|-------|--------|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EB28X (S) | EB570 (S) | EB160 | EB560 (S) | EB150 | EB550 (S) | EB190 | EB170 | EB73 | EB54X | EB51 | EB710 | EB210 | EB100X | |
| Standard | DCGW 11T302 | DCGW 3(2.5)0.5 | 9.525 | 3.97 | 0.4 | 4.4 | 4 | | | | | | | | | | | | | | | |
| | 11T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 3.9 | | | | | | | | | | | | | | | |
| | 11T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 3.5 | | | | | | | | | | | | | | | |
| | 150404 | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 3.9 | | | | | | | | | | | | | | | |
| | 150408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 3.5 | | | | | | | | | | | | | | | |
| MT | DCGW 11T302 | DCGW 3(2.5)0.5 | 9.525 | 3.97 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | | | | | |
| | 11T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 2.4 | | | | | | | | | | | | | | | |
| | 11T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 2 | | | | | | | | | | | | | | | |
| | 150404 | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.4 | | | | | | | | | | | | | | | |
| | 150408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2 | | | | | | | | | | | | | | | |
| 2MT | DCGW 11T302 | DCGW 3(2.5)0.5 | 9.525 | 3.97 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | | | | | |
| | 11T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 2.4 | | | | | | | | | | | | | | | |
| | 11T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 2 | | | | | | | | | | | | | | | |
| | 150404 | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.4 | | | | | | | | | | | | | | | |
| | 150408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2 | | | | | | | | | | | | | | | |



■ MT : Mini Tips 2MT : Mini 2Tips

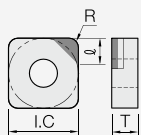
Holder : 89p, 113p, 114p

SNGA

NEGATIVE _ hole



| SNGA | ISO code | | Dimensions (mm) | | | | | | PCBN | | | | | | | | | | | | | |
|-----------|-------------|----------|-----------------|------|-----|------|-----|-----------|-----------|-------|-----------|-------|-----------|-------|-------|------|-------|------|-------|-------|--------|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EB28X (S) | EB570 (S) | EB160 | EB560 (S) | EB150 | EB550 (S) | EB190 | EB170 | EB73 | EB54X | EB51 | EB710 | EB210 | EB100X | |
| Standard | SNGA 090304 | SNGA 321 | 9.525 | 3.18 | 0.4 | 3.81 | 4.4 | | | | | | | | | | | | | | | |
| | 090308 | 322 | 9.525 | 3.18 | 0.8 | 3.81 | 4.4 | | | | | | | | | | | | | | | |
| | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 4.4 | | | | | | | | | | | | | | | |
| | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 4.4 | | | | | | | | | | | | | | | |
| | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 4.4 | | | | | | | | | | | | | | | |
| MT | SNGA 090304 | SNGA 321 | 9.525 | 3.18 | 0.4 | 3.81 | 2.9 | | | | | | | | | | | | | | | |
| | 090308 | 322 | 9.525 | 3.18 | 0.8 | 3.81 | 2.9 | | | | | | | | | | | | | | | |
| | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.9 | | | | | | | | | | | | | | | |
| | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2.9 | | | | | | | | | | | | | | | |
| | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 3.4 | | | | | | | | | | | | | | | |
| 2MT | SNGA 090304 | SNGA 321 | 9.525 | 3.18 | 0.4 | 3.81 | 2.9 | | | | | | | | | | | | | | | |
| | 090308 | 322 | 9.525 | 3.18 | 0.8 | 3.81 | 2.9 | | | | | | | | | | | | | | | |
| | 120404 | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.9 | | | | | | | | | | | | | | | |
| | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2.9 | | | | | | | | | | | | | | | |
| | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 3.4 | | | | | | | | | | | | | | | |
| 4MT | SNGA 120404 | SNGA 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.9 | | | | | | | | | | | | | | | |
| | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2.9 | | | | | | | | | | | | | | | |
| | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 3.4 | | | | | | | | | | | | | | | |
| 8VT solid | SNGA 120404 | SNGA 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.2 | | | | | | | | | | | | | | | |
| | 120408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2.2 | | | | | | | | | | | | | | | |
| | 120412 | 433 | 12.7 | 4.76 | 1.2 | 5.16 | 2.2 | | | | | | | | | | | | | | | |



■ MT : Mini Tips 2MT : Mini 2Tips 4MT : Mini 4Tips 8VT : Vertical 8Tips

Holder : 76p, 77p, 80p, 81p, 84p, 85p, 109p, 119p

SNGN

NEGATIVE



| SNGN | | | ISO code | | Dimensions (mm) | | | | | PCBN | | | | | | | | | | | | | | | | |
|-----------|----------|--------|----------|--------|-----------------|-------|-------|------|-----|-----------|-----------|-------|-----------|-------|-----------|-------|-------|------|-------|------|-------|-------|--------|--|--|--|
| | | | Metric | Inch | I.C | T | R | Hole | ℓ | EB28X (S) | EB570 (S) | EB160 | EB560 (S) | EB150 | EB550 (S) | EB190 | EB170 | EB73 | EB54X | EB51 | EB710 | EB210 | EB100X | | | |
| | Standard | SNGN | 090304 | SNGN | 321 | 9.525 | 3.18 | 0.4 | | 4.4 | | | | | | | | | | | | | | | | |
| | | | | 090308 | | 322 | 9.525 | 3.18 | 0.8 | | 4.4 | | | | | | | | | | | | | | | |
| | | | | 120404 | | 431 | 12.7 | 4.76 | 0.4 | | 4.4 | | | | | | | | | | | | | | | |
| | | | | 120408 | | 432 | 12.7 | 4.76 | 0.8 | | 4.4 | | | | | | | | | | | | | | | |
| | | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | | 4.4 | | | | | | | | | | | | | | | |
| | | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | | 4.4 | | | | | | | | | | | | | | | |
| | MT | SNGN | 090304 | SNGN | 321 | 9.525 | 3.18 | 0.4 | | 2.9 | | | | | | | | | | | | | | | | |
| | | | | 090308 | | 322 | 9.525 | 3.18 | 0.8 | | 2.9 | | | | | | | | | | | | | | | |
| | | | | 120404 | | 431 | 12.7 | 4.76 | 0.4 | | 2.9 | | | | | | | | | | | | | | | |
| | | | | 120408 | | 432 | 12.7 | 4.76 | 0.8 | | 2.9 | | | | | | | | | | | | | | | |
| | | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | | 3.4 | | | | | | | | | | | | | | | |
| | | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | | 3.4 | | | | | | | | | | | | | | | |
| 2MT | SNGN | 090304 | SNGN | 321 | 9.525 | 3.18 | 0.4 | | 2.9 | | | | | | | | | | | | | | | | | |
| | | | 090308 | | 322 | 9.525 | 3.18 | 0.8 | | 2.9 | | | | | | | | | | | | | | | | |
| | | | 120404 | | 431 | 12.7 | 4.76 | 0.4 | | 2.9 | | | | | | | | | | | | | | | | |
| | | | 120408 | | 432 | 12.7 | 4.76 | 0.8 | | 2.9 | | | | | | | | | | | | | | | | |
| | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | | 3.4 | | | | | | | | | | | | | | | | |
| | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | | 3.4 | | | | | | | | | | | | | | | | |
| 4MT | SNGN | 120404 | SNGN | 431 | 12.7 | 4.76 | 0.4 | | 2.9 | | | | | | | | | | | | | | | | | |
| | | | 120408 | | 432 | 12.7 | 4.76 | 0.8 | | 2.9 | | | | | | | | | | | | | | | | |
| | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | | 3.4 | | | | | | | | | | | | | | | | |
| | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | | 3.4 | | | | | | | | | | | | | | | | |
| | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | | 3.4 | | | | | | | | | | | | | | | | |
| | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | | 3.4 | | | | | | | | | | | | | | | | |
| 8VT solid | SNGN | 120404 | SNGN | 431 | 12.7 | 4.76 | 0.4 | | 2.2 | | | | | | | | | | | | | | | | | |
| | | | 120408 | | 432 | 12.7 | 4.76 | 0.8 | | 2.2 | | | | | | | | | | | | | | | | |
| | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | | 2.2 | | | | | | | | | | | | | | | | |
| | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | | 2.2 | | | | | | | | | | | | | | | | |
| | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | | 2.2 | | | | | | | | | | | | | | | | |
| | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | | 2.2 | | | | | | | | | | | | | | | | |

■ MT : Mini Tips 2MT : Mini 2Tips 4MT : Mini 4Tips 8VT : Vertical 8Tips

■ Solid

| SNGN | | | ISO code | | Dimensions (mm) | | | | | PCBN | | | | | | | | | | | | | | | |
|------|-------|------|----------|--------|-----------------|-------|-------|------|-----|--------|------|--------|-----|-------|-------|-------|--|--|--|--|--|--|--|--|--|
| | | | Metric | Inch | I.C | T | R | Hole | ℓ | EB1000 | EB50 | EB100X | HBN | HBN-T | HBN-W | HBN-N | | | | | | | | | |
| | Solid | SNGN | 090304 | SNGN | 321 | 9.525 | 3.18 | 0.4 | | | | | | | | | | | | | | | | | |
| | | | | 090308 | | 322 | 9.525 | 3.18 | 0.8 | | | | | | | | | | | | | | | | |
| | | | | 120404 | | 431 | 12.7 | 4.76 | 0.4 | | | | | | | | | | | | | | | | |
| | | | | 120408 | | 432 | 12.7 | 4.76 | 0.8 | | | | | | | | | | | | | | | | |
| | | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | | | | | | | | | | | | | | | | |
| | | | | 120412 | | 433 | 12.7 | 4.76 | 1.2 | | | | | | | | | | | | | | | | |

SPGN

POSITIVE 11



| SPGN | ISO code | | Dimensions (mm) | | | | | PCBN | | | | | | | | | | | | | | | |
|-----------|-------------|-------------|-----------------|-------|-------|------|-----|-----------|-----------|-------|-----------|-------|-----------|-------|-------|------|-------|------|-------|-------|--------|--|--|
| | Metric | Inch | I.C | T | R | Hole | φ | EB28X (S) | EB570 (S) | EB160 | EB560 (S) | EB150 | EB550 (S) | EB190 | EB170 | EB73 | EB54X | EB51 | EB710 | EB210 | EB100X | | |
| | Standard | SPGN 090304 | SPGN 321 | 9.525 | 3.18 | 0.4 | | 4.4 | | | | | | | | | | | | | | | |
| | | | 090308 | 322 | 9.525 | 3.18 | 0.8 | | 4.4 | | | | | | | | | | | | | | |
| | | | 120404 | 431 | 12.7 | 4.76 | 0.4 | | 4.4 | | | | | | | | | | | | | | |
| | | | 120408 | 432 | 12.7 | 4.76 | 0.8 | | 4.4 | | | | | | | | | | | | | | |
| | | | 120412 | 433 | 12.7 | 4.76 | 1.2 | | 4.4 | | | | | | | | | | | | | | |
| | | | 120412 | 433 | 12.7 | 4.76 | 1.2 | | 4.4 | | | | | | | | | | | | | | |
| | MT | SPGN 090304 | SPGN 321 | 9.525 | 3.18 | 0.4 | | 2.9 | | | | | | | | | | | | | | | |
| | | | 090308 | 322 | 9.525 | 3.18 | 0.8 | | 2.9 | | | | | | | | | | | | | | |
| | | | 120404 | 431 | 12.7 | 4.76 | 0.4 | | 2.9 | | | | | | | | | | | | | | |
| | | | 120408 | 432 | 12.7 | 4.76 | 0.8 | | 2.9 | | | | | | | | | | | | | | |
| | | | 120412 | 433 | 12.7 | 4.76 | 1.2 | | 3.4 | | | | | | | | | | | | | | |
| | | | 120412 | 433 | 12.7 | 4.76 | 1.2 | | 3.4 | | | | | | | | | | | | | | |
| 2MT | SPGN 090304 | SPGN 321 | 9.525 | 3.18 | 0.4 | | 2.9 | | | | | | | | | | | | | | | | |
| | | 090308 | 322 | 9.525 | 3.18 | 0.8 | | 2.9 | | | | | | | | | | | | | | | |
| | | 120404 | 431 | 12.7 | 4.76 | 0.4 | | 2.9 | | | | | | | | | | | | | | | |
| | | 120408 | 432 | 12.7 | 4.76 | 0.8 | | 2.9 | | | | | | | | | | | | | | | |
| | | 120412 | 433 | 12.7 | 4.76 | 1.2 | | 3.4 | | | | | | | | | | | | | | | |
| | | 120412 | 433 | 12.7 | 4.76 | 1.2 | | 3.4 | | | | | | | | | | | | | | | |
| 4MT | SPGN 120404 | SPGN 431 | 12.7 | 4.76 | 0.4 | | 2.9 | | | | | | | | | | | | | | | | |
| | | 120408 | 432 | 12.7 | 4.76 | 0.8 | | 2.9 | | | | | | | | | | | | | | | |
| | | 120412 | 433 | 12.7 | 4.76 | 1.2 | | 3.4 | | | | | | | | | | | | | | | |
| Full face | SPGN 090304 | SPGN 321 | 9.525 | 3.18 | 0.4 | | | | | | | | | | | | | | | | | | |
| | | 090308 | 322 | 9.525 | 3.18 | 0.8 | | | | | | | | | | | | | | | | | |
| | | 120404 | 431 | 12.7 | 4.76 | 0.4 | | | | | | | | | | | | | | | | | |
| | | 120408 | 432 | 12.7 | 4.76 | 0.8 | | | | | | | | | | | | | | | | | |
| | | 120412 | 433 | 12.7 | 4.76 | 1.2 | | | | | | | | | | | | | | | | | |

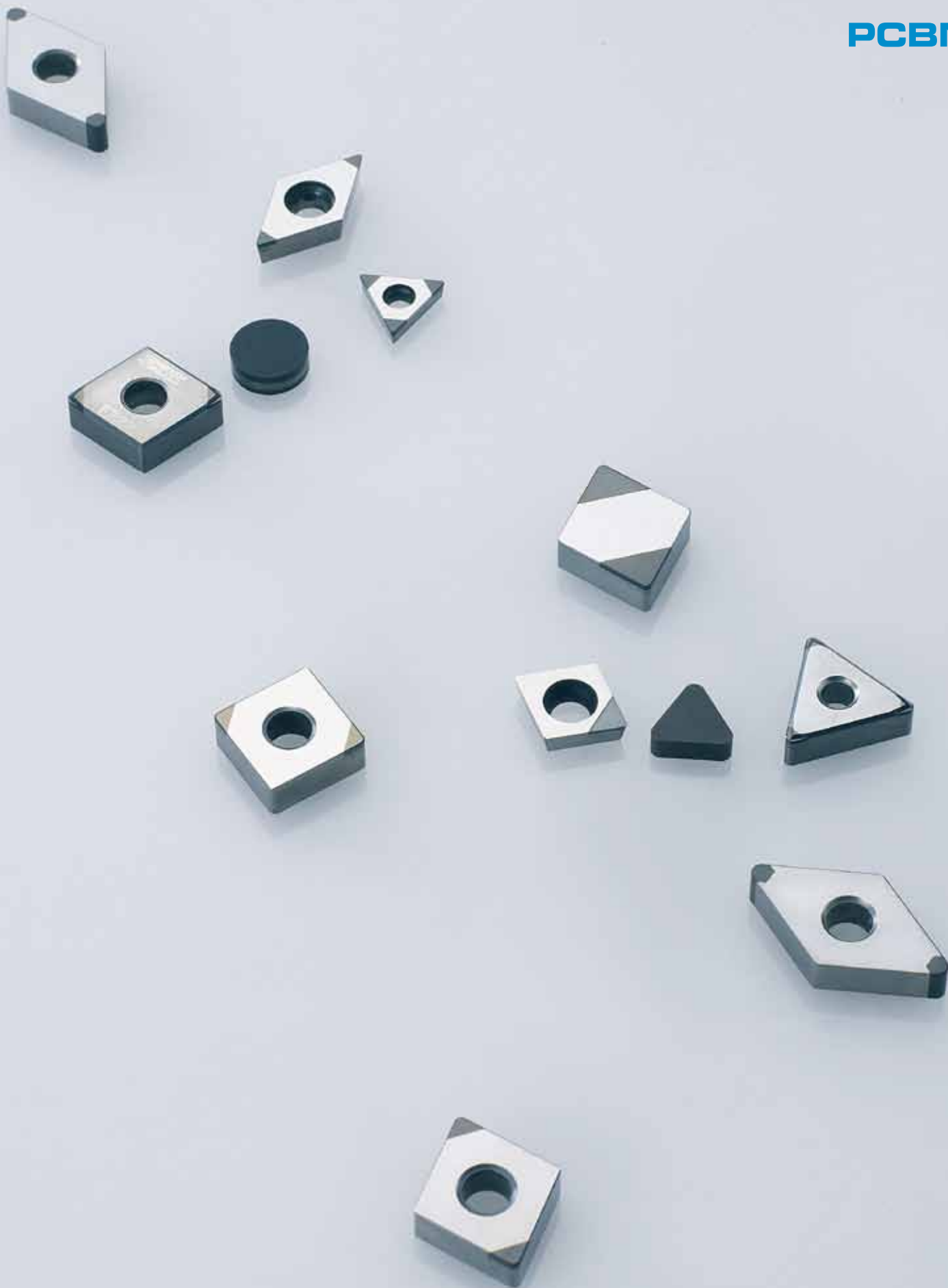
■ MT : Mini Tips 2MT : Mini 2Tips 4MT : Mini 4Tips

TBGN

POSITIVE 5

■ Carbide backed

| TBGN | ISO code | | Dimensions (mm) | | | | | PCBN | | | | | | | | | | | | | | |
|------|-----------|-------------|-----------------|-------------|------|------|-----|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|-------|--|--|--|
| | Metric | Inch | I.C | T | R | Hole | φ | EB28X | EB570 | EB160 | EB560 | EB150 | EB550 | EB190 | EB170 | EB73 | EB51 | EB710 | EB210 | | | |
| | Full face | TBGN 060102 | TBGN(1.2)10.5 | 3.97 | 1.59 | 0.2 | | | | | | | | | | | | | | | | |
| | | | 060104 | (1.2)11 | 3.97 | 1.59 | 0.4 | | | | | | | | | | | | | | | |
| | | | 060108 | (1.2)12 | 3.97 | 1.59 | 0.8 | | | | | | | | | | | | | | | |
| | | | 080202 | 1.5(1.5)0.5 | 4.76 | 2.38 | 0.2 | | | | | | | | | | | | | | | |
| | | | 080204 | 1.5(1.5)1 | 4.76 | 2.38 | 0.4 | | | | | | | | | | | | | | | |
| | | | 080208 | 1.5(1.5)2 | 4.76 | 2.38 | 0.8 | | | | | | | | | | | | | | | |
| | | | 080212 | 1.5(1.5)3 | 4.76 | 2.38 | 1.2 | | | | | | | | | | | | | | | |
| | | | 080212 | 1.5(1.5)3 | 4.76 | 2.38 | 1.2 | | | | | | | | | | | | | | | |



TNGA

NEGATIVE _ hole



| TNGA | ISO code | | Dimensions (mm) | | | | | | PCBN | | | | | | | | | | | | | | |
|-----------|-------------|-------------|-----------------|-------|-------|------|------|-----------|-----------|-------|-----------|-------|-----------|-------|-------|------|-------|------|-------|-------|--------|--|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EB28X (S) | EB570 (S) | EB160 | EB560 (S) | EB150 | EB550 (S) | EB190 | EB170 | EB73 | EB54X | EB51 | EB710 | EB210 | EB100X | | |
| | Standard | TNGA 110304 | TNGA 221 | 6.35 | 3.18 | 0.4 | 2.4 | 4 | | | | | | | | | | | | | | | |
| | | | 160404 | 331 | 9.525 | 4.76 | 0.4 | 3.81 | 4 | | | | | | | | | | | | | | |
| | | | 160408 | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 3.7 | | | | | | | | | | | | | | |
| | | | 220404 | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 4 | | | | | | | | | | | | | | |
| | MT | | 160408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 3.7 | | | | | | | | | | | | | | |
| | | TNGA 110304 | TNGA 221 | 6.35 | 3.18 | 0.4 | 2.4 | 2.5 | | | | | | | | | | | | | | | |
| | | | 160404 | 331 | 9.525 | 4.76 | 0.8 | 3.81 | 2.5 | | | | | | | | | | | | | | |
| | | | 160408 | 332 | 9.525 | 4.76 | 0.4 | 3.81 | 2.2 | | | | | | | | | | | | | | |
| | 3MT | | 160408 | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 2.2 | | | | | | | | | | | | | | |
| | | TNGA 110304 | TNGA 221 | 6.35 | 3.18 | 0.4 | 2.4 | 2.5 | | | | | | | | | | | | | | | |
| | | | 160404 | 331 | 9.525 | 4.76 | 0.4 | 3.81 | 2.5 | | | | | | | | | | | | | | |
| | | | 160408 | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 2.2 | | | | | | | | | | | | | | |
| 6VT Solid | | 220404 | 431 | 12.7 | 4.76 | 0.4 | 5.16 | 2.5 | | | | | | | | | | | | | | | |
| | | 220408 | 432 | 12.7 | 4.76 | 0.8 | 5.16 | 2.2 | | | | | | | | | | | | | | | |
| | TNGA 160404 | TNGA 331 | 9.525 | 4.76 | 0.4 | 3.81 | 2.9 | | | | | | | | | | | | | | | | |
| | | 160408 | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 2.6 | | | | | | | | | | | | | | | |

■ MT : Mini Tips 3MT : Mini 3Tips 6VT : Vertical 6Tips

Holder : 77p, 81p, 85p, 86p, 110p, 111p

TNGN

NEGATIVE



| TNGN | ISO code | | Dimensions (mm) | | | | | | PCBN | | | | | | | | | | | | | | |
|------|-----------|-------------|-----------------|----------|-------|------|-----|-----------|-----------|-------|-----------|-------|-----------|-------|-------|------|-------|------|-------|-------|--------|--|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EB28X (S) | EB570 (S) | EB160 | EB560 (S) | EB150 | EB550 (S) | EB190 | EB170 | EB73 | EB54X | EB51 | EB710 | EB210 | EB100X | | |
| | Standard | TNGN 160404 | TNGN 331 | 9.525 | 4.76 | 0.4 | 4 | | | | | | | | | | | | | | | | |
| | | | 160408 | 332 | 9.525 | 4.76 | 0.8 | 3.7 | | | | | | | | | | | | | | | |
| | | | 160412 | 333 | 9.525 | 4.76 | 1.2 | 3.4 | | | | | | | | | | | | | | | |
| | MT | | TNGN 160404 | TNGN 331 | 9.525 | 4.76 | 0.4 | 2.5 | | | | | | | | | | | | | | | |
| | | | 160408 | 332 | 9.525 | 4.76 | 0.8 | 2.2 | | | | | | | | | | | | | | | |
| | | | 160412 | 333 | 9.525 | 4.76 | 1.2 | 2.4 | | | | | | | | | | | | | | | |
| | 3MT | | TNGN 160404 | TNGN 331 | 9.525 | 4.76 | 0.4 | 2.5 | | | | | | | | | | | | | | | |
| | | | 160408 | 332 | 9.525 | 4.76 | 0.8 | 2.2 | | | | | | | | | | | | | | | |
| | | | 160412 | 333 | 9.525 | 4.76 | 1.2 | 2.4 | | | | | | | | | | | | | | | |
| | 6VT Solid | | TNGN 160404 | TNGN 331 | 9.525 | 4.76 | 0.4 | 2.9 | | | | | | | | | | | | | | | |
| | | | 160408 | 332 | 9.525 | 4.76 | 0.8 | 2.6 | | | | | | | | | | | | | | | |
| | | | 160412 | 333 | 9.525 | 4.76 | 1.2 | 2.3 | | | | | | | | | | | | | | | |

■ MT : Mini Tips 3MT : Mini 3Tips 6VT : Vertical 6Tips

■ Solid

| TNGN | ISO code | | Dimensions (mm) | | | | | | PCBN | | | | | | |
|------|----------|-------------|-----------------|------|-------|------|-----|--------|------|--------|-----|-------|-------|-------|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EB1000 | EB50 | EB100X | HBN | HBN-T | HBN-W | HBN-N | |
| | Solid | TNGN 110304 | TNGN 221 | 6.35 | 3.18 | 0.4 | | | | | | | | | |
| | | | 110308 | 222 | 6.35 | 3.18 | 0.8 | | | | | | | | |
| | | | 160408 | 332 | 9.525 | 4.76 | 0.8 | | | | | | | | |
| | | | 160412 | 333 | 9.525 | 4.76 | 1.2 | | | | | | | | |

TCGW

POSITIVE 7 - hole



| TCGW | ISO code | | Dimensions (mm) | | | | | | PCBN | | | | | | | | | | | | | | | | |
|------|----------|-------------|-----------------|----------------|-------------|----------------|-------|-----------|-----------|-------|-----------|-------|-----------|-------|-------|------|-------|------|-------|-------|--------|--|--|--|--|
| | Metric | Inch | I.C | T | R | Hole | φ | EB28X (S) | EB570 (S) | EB160 | EB560 (S) | EB150 | EB550 (S) | EB190 | EB170 | EB73 | EB54X | EB51 | EB710 | EB210 | EB100X | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Standard | TCGW 16T302 | TCGW 3(2.5)0.5 | 9.525 | 3.97 | 0.2 | 4.4 | 4.1 | | | | | | | | | | | | | | | | | |
| | | | 16T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 4 | | | | | | | | | | | | | | | | |
| | | | 16T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 3.7 | | | | | | | | | | | | | | | | |
| | | MT | TCGW 090202 | TCGW 2(1.5)0.5 | 5.56 | 2.38 | 0.2 | 2.5 | 2.6 | | | | | | | | | | | | | | | | |
| | | | | 090204 | 2(1.5)1 | 5.56 | 2.38 | 0.4 | 2.5 | 2.5 | | | | | | | | | | | | | | | |
| | | | | 110202 | 2(1.5)0.5 | 6.35 | 2.38 | 0.2 | 2.8 | 2.6 | | | | | | | | | | | | | | | |
| | | | 3MT | TCGW 110204 | 2(1.5)1 | 6.35 | 2.38 | 0.4 | 2.8 | 2.5 | | | | | | | | | | | | | | | |
| | | | | | 110208 | 2(1.5)2 | 6.35 | 2.38 | 0.8 | 2.8 | 2.2 | | | | | | | | | | | | | | |
| | | | | | 16T302 | 3(2.5)0.5 | 9.525 | 3.97 | 0.2 | 4.4 | 2.6 | | | | | | | | | | | | | | |
| | | | | | 16T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | | | | |
| | | | | | 16T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 2.2 | | | | | | | | | | | | | | |
| | | | | | TCGW 090202 | TCGW 2(1.5)0.5 | 5.56 | 2.38 | 0.2 | 2.5 | 2.6 | | | | | | | | | | | | | | |
| | | | | 090204 | 2(1.5)1 | 5.56 | 2.38 | 0.4 | 2.5 | 2.5 | | | | | | | | | | | | | | | |
| | | | | 110202 | 2(1.5)0.5 | 6.35 | 2.38 | 0.2 | 2.8 | 2.6 | | | | | | | | | | | | | | | |
| | | | | 110204 | 2(1.5)1 | 6.35 | 2.38 | 0.4 | 2.8 | 2.5 | | | | | | | | | | | | | | | |
| | | | 110208 | 2(1.5)2 | 6.35 | 2.38 | 0.8 | 2.8 | 2.2 | | | | | | | | | | | | | | | | |
| | | | 16T302 | 3(2.5)0.5 | 9.525 | 3.97 | 0.2 | 4.4 | 2.6 | | | | | | | | | | | | | | | | |
| | | | 16T304 | 3(2.5)1 | 9.525 | 3.97 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | | | | | | |
| | | 16T308 | 3(2.5)2 | 9.525 | 3.97 | 0.8 | 4.4 | 2.2 | | | | | | | | | | | | | | | | | |

■ MT : Mini Tips 3MT : Mini 3Tips

Holder : 92p, 93p, 115p

TPGN

POSITIVE 11



| TPGN | ISO code | | Dimensions (mm) | | | | | | PCBN | | | | | | | | | | | | | | | | |
|------|----------|-------------|-----------------|-------------|-------------|----------|-------|-----------|-----------|-------|-----------|-------|-----------|-------|-------|------|-------|------|-------|-------|--------|--|--|--|--|
| | Metric | Inch | I.C | T | R | Hole | φ | EB28X (S) | EB570 (S) | EB160 | EB560 (S) | EB150 | EB550 (S) | EB190 | EB170 | EB73 | EB54X | EB51 | EB710 | EB210 | EB100X | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Standard | TPGN 160304 | TPGN 321 | 9.525 | 3.18 | 0.4 | | 4 | | | | | | | | | | | | | | | | | |
| | | | 160308 | 322 | 9.525 | 3.18 | 0.8 | | 3.7 | | | | | | | | | | | | | | | | |
| | | | 220404 | 431 | 12.7 | 4.76 | 0.4 | | 4 | | | | | | | | | | | | | | | | |
| | | MT | TPGN 220408 | 432 | 12.7 | 4.76 | 0.8 | | 3.7 | | | | | | | | | | | | | | | | |
| | | | | 220412 | 433 | 12.7 | 4.76 | 1.2 | | 3.4 | | | | | | | | | | | | | | | |
| | | | | TPGN 160304 | TPGN 321 | 9.525 | 3.18 | 0.4 | | 2.5 | | | | | | | | | | | | | | | |
| | | | 3MT | TPGN 160308 | 322 | 9.525 | 3.18 | 0.8 | | 2.2 | | | | | | | | | | | | | | | |
| | | | | | TPGN 160304 | TPGN 321 | 9.525 | 3.18 | 0.4 | | 2.5 | | | | | | | | | | | | | | |
| | | | | | TPGN 160308 | 322 | 9.525 | 3.18 | 0.8 | | 2.2 | | | | | | | | | | | | | | |

■ MT : Mini Tips 3MT : Mini 3Tips

TPGW

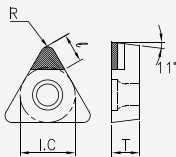
POSITIVE 11 _ hole



| TPGW | ISO code | | Dimensions (mm) | | | | | PCBN | | | | | | | | | | | | | | |
|----------|----------|--------|-----------------|---------|-------------|-------|------|-----------|-----------|-------|-----------|-------|-----------|-------|-------|------|-------|------|-------|-------|--------|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EB28X (S) | EB570 (S) | EB160 | EB560 (S) | EB150 | EB550 (S) | EB190 | EB170 | EB73 | EB54X | EB51 | EB710 | EB210 | EB100X | |
| Standard | TPGW | 160302 | TPGW | 32(0.5) | 9.525 | 3.18 | 0.2 | 4.4 | 4.1 | | | | | | | | | | | | | |
| | | 160304 | | 321 | 9.525 | 3.18 | 0.4 | 4.4 | 4 | | | | | | | | | | | | | |
| | | 160308 | | 322 | 9.525 | 3.18 | 0.8 | 4.4 | 3.7 | | | | | | | | | | | | | |
| | | 160404 | | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 4 | | | | | | | | | | | | | |
| | | 160408 | | 332 | 9.525 | 4.76 | 0.8 | 4.4 | 3.7 | | | | | | | | | | | | | |
| | MT | TPGW | 080202 | TPGW | 1.5(1.5)0.5 | 4.76 | 2.38 | 0.2 | 2.3 | 2.6 | | | | | | | | | | | | |
| | | | 080204 | | 1.5(1.5)1 | 4.76 | 2.38 | 0.4 | 2.3 | 2.5 | | | | | | | | | | | | |
| | | | 090202 | | 1.5)0.5 | 5.56 | 2.38 | 0.2 | 2.5 | 2.6 | | | | | | | | | | | | |
| | | | 090204 | | 1.5)1 | 5.56 | 2.38 | 0.4 | 2.5 | 2.5 | | | | | | | | | | | | |
| | | | 110202 | | 21(0.5) | 6.35 | 2.38 | 0.2 | 2.8 | 2.6 | | | | | | | | | | | | |
| | | | 110204 | | 211 | 6.35 | 2.38 | 0.4 | 2.8 | 2.5 | | | | | | | | | | | | |
| | | | 110302 | | 22(0.5) | 6.35 | 3.18 | 0.2 | 3.4 | 2.6 | | | | | | | | | | | | |
| | | | 110304 | | 221 | 6.35 | 3.18 | 0.4 | 3.4 | 2.5 | | | | | | | | | | | | |
| | | | 110308 | | 222 | 6.35 | 3.18 | 0.8 | 3.4 | 2.2 | | | | | | | | | | | | |
| | | | 160302 | | 32(0.5) | 9.525 | 3.18 | 0.2 | 4.4 | 2.6 | | | | | | | | | | | | |
| | | | 160304 | | 321 | 9.525 | 3.18 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | | |
| | | 160308 | | 322 | 9.525 | 3.18 | 0.8 | 4.4 | 2.2 | | | | | | | | | | | | | |
| | | 160404 | | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | | | |
| | | 160408 | | 332 | 9.525 | 4.76 | 0.8 | 4.4 | 2.2 | | | | | | | | | | | | | |
| 3MT | | TPGW | 080202 | TPGW | 1.5(1.5)0.5 | 4.76 | 2.38 | 0.2 | 2.3 | 2.6 | | | | | | | | | | | | |
| | | | 080204 | | 1.5(1.5)1 | 4.76 | 2.38 | 0.4 | 2.3 | 2.5 | | | | | | | | | | | | |
| | | 090202 | | 1.5)0.5 | 5.56 | 2.38 | 0.2 | 2.5 | 2.6 | | | | | | | | | | | | | |
| | | 090204 | | 1.5)1 | 5.56 | 2.38 | 0.4 | 2.5 | 2.5 | | | | | | | | | | | | | |
| | | 110202 | | 21(0.5) | 6.35 | 2.38 | 0.2 | 2.8 | 2.6 | | | | | | | | | | | | | |
| | | 110204 | | 211 | 6.35 | 2.38 | 0.4 | 2.8 | 2.5 | | | | | | | | | | | | | |
| | | 110302 | | 22(0.5) | 6.35 | 3.18 | 0.2 | 3.4 | 2.6 | | | | | | | | | | | | | |
| | | 110304 | | 221 | 6.35 | 3.18 | 0.4 | 3.4 | 2.5 | | | | | | | | | | | | | |
| | | 110308 | | 222 | 6.35 | 3.18 | 0.8 | 3.4 | 2.2 | | | | | | | | | | | | | |
| | | 160302 | | 32(0.5) | 9.525 | 3.18 | 0.2 | 4.4 | 2.6 | | | | | | | | | | | | | |
| | | 160304 | | 321 | 9.525 | 3.18 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | | | |
| | | 160308 | | 322 | 9.525 | 3.18 | 0.8 | 4.4 | 2.2 | | | | | | | | | | | | | |
| | | 160404 | | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | | | |
| | | 160408 | | 332 | 9.525 | 4.76 | 0.8 | 4.4 | 2.2 | | | | | | | | | | | | | |

■ MT : Mini Tips 3MT : Mini 3Tips

Holder : 116p



VNGA

NEGATIVE _ hole



| VNGA | ISO code | | Dimensions (mm) | | | | | PCBN | | | | | | | | | | | | | | | |
|------|-----------|-------------|-----------------|-------|------|------|------|-----------|-----------|-------|-----------|-------|-----------|-------|-------|------|-------|------|-------|-------|--------|--|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EB28X (S) | EB570 (S) | EB160 | EB560 (S) | EB150 | EB550 (S) | EB190 | EB170 | EB73 | EB54X | EB51 | EB710 | EB210 | EB100X | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| | Standard | VNGA 160402 | VNGA 33(0.5) | 9.525 | 4.76 | 0.2 | 3.81 | 5 | | | | | | | | | | | | | | | |
| | | 160404 | 331 | 9.525 | 4.76 | 0.4 | 3.81 | 4.5 | | | | | | | | | | | | | | | |
| | | 160408 | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 3.7 | | | | | | | | | | | | | | | |
| | MT | VNGA 160402 | VNGA 33(0.5) | 9.525 | 4.76 | 0.2 | 3.81 | 3 | | | | | | | | | | | | | | | |
| | | 160404 | 331 | 9.525 | 4.76 | 0.4 | 3.81 | 2.5 | | | | | | | | | | | | | | | |
| | | 160408 | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 2.2 | | | | | | | | | | | | | | | |
| | 2MT | VNGA 160402 | VNGA 33(0.5) | 9.525 | 4.76 | 0.2 | 3.81 | 3 | | | | | | | | | | | | | | | |
| | | 160404 | 331 | 9.525 | 4.76 | 0.4 | 3.81 | 2.5 | | | | | | | | | | | | | | | |
| | | 160408 | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 2.2 | | | | | | | | | | | | | | | |
| | 4VT solid | VNGA 160402 | VNGA 33(0.5) | 9.525 | 4.76 | 0.2 | 3.81 | 2.6 | | | | | | | | | | | | | | | |
| | | 160404 | 331 | 9.525 | 4.76 | 0.4 | 3.81 | 2.2 | | | | | | | | | | | | | | | |
| | | 160408 | 332 | 9.525 | 4.76 | 0.8 | 3.81 | 2.3 | | | | | | | | | | | | | | | |

■ MT : Mini Tips 2MT : Mini 2Tips 4VT : Vertical 4Tips

Holder : 78p, 87p, 111p

VBGW

POSITIVE 5 _ hole



| VBGW | ISO code | | Dimensions (mm) | | | | | PCBN | | | | | | | | | | | | | | | |
|------|----------|-------------|-----------------|-------|------|------|-----|-----------|-----------|-------|-----------|-------|-----------|-------|-------|------|-------|------|-------|-------|--------|--|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EB28X (S) | EB570 (S) | EB160 | EB560 (S) | EB150 | EB550 (S) | EB190 | EB170 | EB73 | EB54X | EB51 | EB710 | EB210 | EB100X | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| | Standard | VBGW 110302 | VBGW 22(0.5) | 6.35 | 3.18 | 0.2 | 2.8 | 5 | | | | | | | | | | | | | | | |
| | | 110304 | 221 | 6.35 | 3.18 | 0.4 | 2.8 | 4.5 | | | | | | | | | | | | | | | |
| | | 160402 | 33(0.5) | 9.525 | 4.76 | 0.2 | 2.8 | 5 | | | | | | | | | | | | | | | |
| | | 160404 | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 4.5 | | | | | | | | | | | | | | | |
| | | 160408 | 332 | 9.525 | 4.76 | 0.8 | 4.4 | 3.7 | | | | | | | | | | | | | | | |
| | | 160412 | 333 | 9.525 | 4.76 | 1.2 | 4.4 | 3.3 | | | | | | | | | | | | | | | |
| | MT | VBGW 110302 | VBGW 22(0.5) | 6.35 | 3.18 | 0.2 | 2.8 | 3 | | | | | | | | | | | | | | | |
| | | 110304 | 221 | 6.35 | 3.18 | 0.4 | 2.8 | 2.5 | | | | | | | | | | | | | | | |
| | | 160402 | 33(0.5) | 9.525 | 4.76 | 0.2 | 2.8 | 3 | | | | | | | | | | | | | | | |
| | | 160404 | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | | | | | |
| | | 160408 | 332 | 9.525 | 4.76 | 0.8 | 4.4 | 2.2 | | | | | | | | | | | | | | | |
| | | 160412 | 333 | 9.525 | 4.76 | 1.2 | 4.4 | 1.8 | | | | | | | | | | | | | | | |
| | 2MT | VBGW 110302 | VBGW 22(0.5) | 6.35 | 3.18 | 0.2 | 2.8 | 3 | | | | | | | | | | | | | | | |
| | | 110304 | 221 | 6.35 | 3.18 | 0.4 | 2.8 | 2.5 | | | | | | | | | | | | | | | |
| | | 160402 | 33(0.5) | 9.525 | 4.76 | 0.2 | 2.8 | 3 | | | | | | | | | | | | | | | |
| | | 160404 | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | | | | | |
| | | 160408 | 332 | 9.525 | 4.76 | 0.8 | 4.4 | 2.2 | | | | | | | | | | | | | | | |
| | | 160412 | 333 | 9.525 | 4.76 | 1.2 | 4.4 | 1.8 | | | | | | | | | | | | | | | |

■ MT : Mini Tips 2MT : Mini 2Tips

Holder : 93p, 94p, 117p

VCGW

POSITIVE 7 _ hole



| VCGW | ISO code | | Dimensions (mm) | | | | | PCBN | | | | | | | | | | | | | | |
|----------|----------|--------|-----------------|---------|-------|------|-----|-----------|-----------|-------|-----------|-------|-----------|-------|-------|------|-------|------|-------|-------|--------|--|
| | Metric | Inch | I.C | T | R | Hole | ℓ | EB28X (S) | EB570 (S) | EB160 | EB560 (S) | EB150 | EB550 (S) | EB190 | EB170 | EB73 | EB54X | EB51 | EB710 | EB210 | EB100X | |
| | | | | | | | | | | | | | | | | | | | | | | |
| Standard | VCGW | 110302 | VCGW | 22(0.5) | 6.35 | 3.18 | 0.2 | 2.8 | 5 | | | | | | | | | | | | | |
| | | 110304 | | 221 | 6.35 | 3.18 | 0.4 | 2.8 | 4.5 | | | | | | | | | | | | | |
| | | 160402 | | 33(0.5) | 9.525 | 4.76 | 0.2 | 4.4 | 5 | | | | | | | | | | | | | |
| | | 160404 | | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 4.5 | | | | | | | | | | | | | |
| | | 160408 | | 332 | 9.525 | 4.76 | 0.8 | 4.4 | 3.7 | | | | | | | | | | | | | |
| | | 160412 | | 333 | 9.525 | 4.76 | 1.2 | 4.4 | 3.3 | | | | | | | | | | | | | |
| MT | VCGW | 110302 | VCGW | 22(0.5) | 6.35 | 3.18 | 0.2 | 2.8 | 3 | | | | | | | | | | | | | |
| | | 110304 | | 221 | 6.35 | 3.18 | 0.4 | 2.8 | 2.5 | | | | | | | | | | | | | |
| | | 160402 | | 33(0.5) | 9.525 | 4.76 | 0.2 | 4.4 | 3 | | | | | | | | | | | | | |
| | | 160404 | | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | | | |
| | | 160408 | | 332 | 9.525 | 4.76 | 0.8 | 4.4 | 2.2 | | | | | | | | | | | | | |
| | | 160412 | | 333 | 9.525 | 4.76 | 1.2 | 4.4 | 1.8 | | | | | | | | | | | | | |
| 2MT | VCGW | 110302 | VCGW | 22(0.5) | 6.35 | 3.18 | 0.2 | 2.8 | 3 | | | | | | | | | | | | | |
| | | 110304 | | 221 | 6.35 | 3.18 | 0.4 | 2.8 | 2.5 | | | | | | | | | | | | | |
| | | 160402 | | 33(0.5) | 9.525 | 4.76 | 0.2 | 4.4 | 3 | | | | | | | | | | | | | |
| | | 160404 | | 331 | 9.525 | 4.76 | 0.4 | 4.4 | 2.5 | | | | | | | | | | | | | |
| | | 160408 | | 332 | 9.525 | 4.76 | 0.8 | 4.4 | 2.2 | | | | | | | | | | | | | |
| | | 160412 | | 333 | 9.525 | 4.76 | 1.2 | 4.4 | 1.8 | | | | | | | | | | | | | |

■ MT : Mini Tips 2MT : Mini 2Tips

Holder : 95p, 116p, 117p, 118p

RNGN

NEGATIVE

■ Carbide backed

| RNGN | ISO code | | Dimensions (mm) | | | | PCBN | | | | | | | |
|------|----------|--------|-----------------|-----|-------|------|------|--|--|--|--|--|--|--|
| | Metric | Inch | I.C | T | R | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | RNGN | 060300 | RNGN | 220 | 6.35 | 3.18 | | | | | | | | |
| | | 090300 | | 320 | 9.525 | 3.18 | | | | | | | | |
| | | 090400 | | 330 | 9.525 | 4.76 | | | | | | | | |
| | | 120300 | | 420 | 12.7 | 3.18 | | | | | | | | |
| | | 120400 | | 430 | 12.7 | 4.76 | | | | | | | | |

■ Solid

| Shape | ISO code | | Dimensions (mm) | | | | PCBN | | | | | | | | | | | |
|-------|----------|--------|-----------------|-----|-------|------|------|--|--|--|--|--|--|--|--|--|--|--|
| | Metric | Inch | I.C | T | R | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | RNGN | 060300 | RNGN | 220 | 6.35 | 3.18 | | | | | | | | | | | | |
| | | 090300 | | 320 | 9.525 | 3.18 | | | | | | | | | | | | |
| | | 090400 | | 330 | 9.525 | 4.76 | | | | | | | | | | | | |
| | | 120300 | | 420 | 12.7 | 3.18 | | | | | | | | | | | | |
| | | 120400 | | 430 | 12.7 | 4.76 | | | | | | | | | | | | |

RCGX

POSITIVE 7

■ Carbide backed

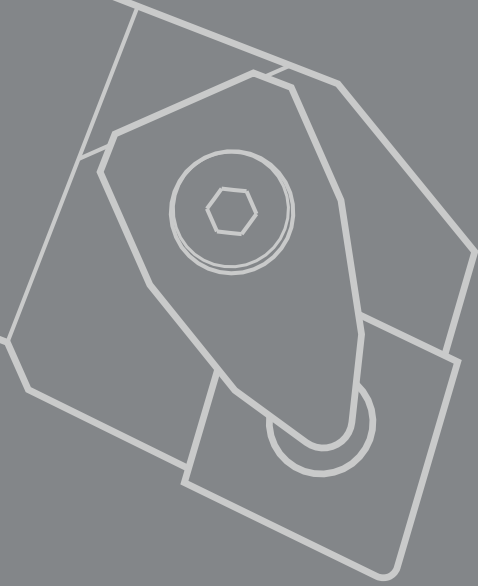
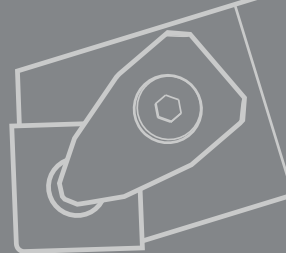
| RCGX | ISO code | | Dimensions (mm) | | | | PCBN | | | | | | | | | | | | |
|------|-------------|----------|-----------------|------|------|----------|------|------|-------|--|--|--|--|--|--|--|--|--|--|
| | Metric | Inch | I.C | t | T | α | EB51 | EB71 | EB71X | | | | | | | | | | |
| | RCGX 060300 | RCGX 220 | 6.35 | 3.18 | 3.32 | 140° | | | | | | | | | | | | | |
| | 090300 | 320 | 9.525 | 3.18 | 3.32 | 140° | | | | | | | | | | | | | |
| | 090700 | 3(-) | 9.525 | 7.7 | 7.94 | 120° | | | | | | | | | | | | | |
| | 120400 | 430 | 12.7 | 4.76 | 4.94 | 140° | | | | | | | | | | | | | |
| | 120700 | 4(-) | 12.7 | 7.7 | 7.94 | 140° | | | | | | | | | | | | | |
| | 191000 | (-) | 19.05 | 9.77 | 10 | 120° | | | | | | | | | | | | | |

■ Solid

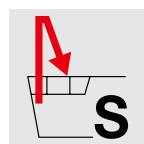
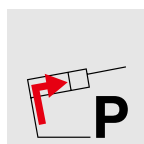
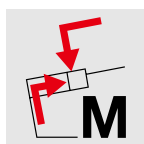
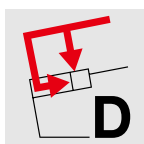
| RCGX | ISO code | | Dimensions (mm) | | | | PCBN | | | | | | | | | | | | |
|------|-------------|----------|-----------------|------|------|----------|-------|-------|--|--|--|--|--|--|--|--|--|--|--|
| | Metric | Inch | I.C | t | T | α | HBN-R | HBN-N | | | | | | | | | | | |
| | RCGX 060300 | RCGX 220 | 6.35 | 3.18 | 3.32 | 140° | | | | | | | | | | | | | |
| | 090300 | 320 | 9.525 | 3.18 | 3.32 | 140° | | | | | | | | | | | | | |
| | 090700 | 3(-) | 9.525 | 7.7 | 7.94 | 120° | | | | | | | | | | | | | |
| | 120400 | 430 | 12.7 | 4.76 | 4.94 | 140° | | | | | | | | | | | | | |
| | 120700 | 4(-) | 12.7 | 7.7 | 7.94 | 140° | | | | | | | | | | | | | |
| | 191000 | (-) | 19.05 | 9.77 | 10 | 120° | | | | | | | | | | | | | |



Turning_ **Holder**



How to combine the holder

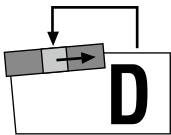


- D** Double clamping
- M** Multi locking
- P** Lever locking
- S** Screw clamping

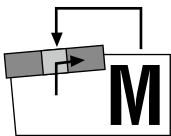
Designation system

D S K D

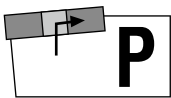
Clamp type Insert shape Tool style Clearance angle



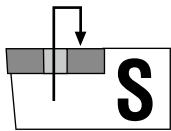
Double clamping



Multi locking



Lever locking

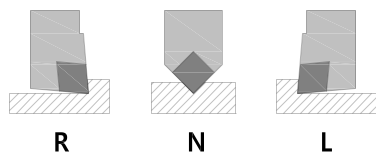


Screw clamping

| Symbol | Shape |
|--------|-------|
| C | |
| D | |
| E | |
| L | |
| R | |
| S | |
| T | |
| V | |
| W | |

| | | | |
|--|--|--|--|
| | | | |
| | | | |
| | | | |
| | | | |

| Symbol | Angle |
|--------|-------|
| N | 0° |
| A | 3° |
| B | 5° |
| C | 7° |
| P | 11° |
| D | 15° |
| E | 20° |
| F | 25° |

R**25****25****12****1****Cutting direction****Tool height****Tool width**

| H | H size (mm) |
|----|-------------|
| 12 | 12 |
| 16 | 16 |
| 20 | 20 |
| 25 | 25 |
| 32 | 32 |
| 40 | 40 |
| 50 | 50 |

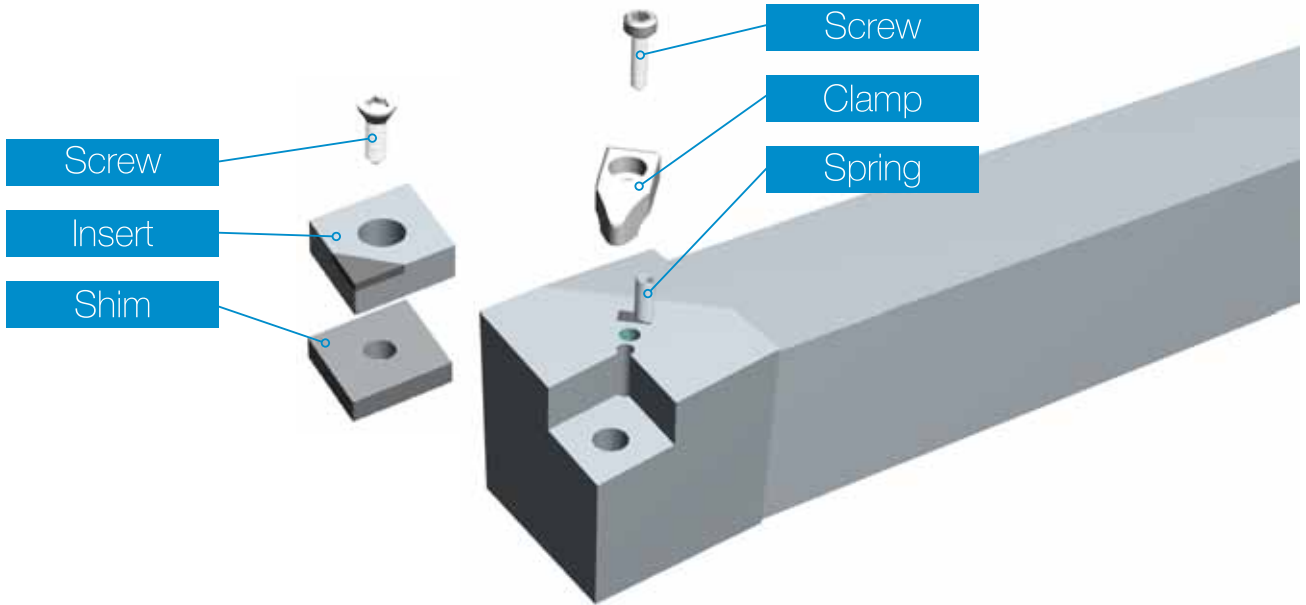
| W | W (mm) |
|----|--------|
| 12 | 12 |
| 16 | 16 |
| 20 | 20 |
| 25 | 25 |
| 32 | 32 |
| 40 | 40 |
| 50 | 50 |

1 Cutting edge length

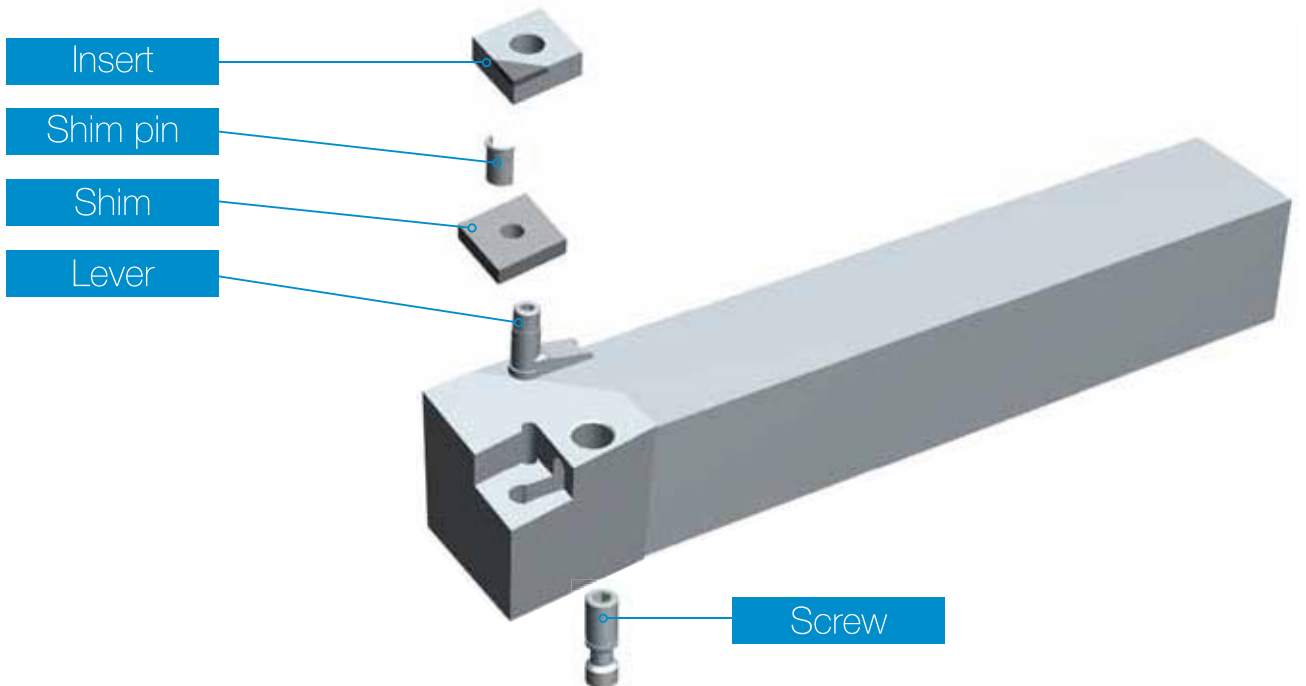
| C | D | E | R | S | T | V | W | K | I.C size (mm) |
|----|----|----|------|----|----|----|----|----|---------------|
| 03 | 04 | | | 03 | 06 | | | | 3.97 |
| 05 | 06 | | | 05 | 09 | 09 | 03 | | 5.56 |
| 06 | 07 | | | 06 | 11 | 11 | 04 | | 6.35 |
| 08 | 09 | | | 07 | 13 | 13 | 05 | | 7.94 |
| | | | 08 | | | | | | 8 |
| 09 | 11 | | 09 | 09 | 16 | 16 | 06 | 16 | 9.525 |
| | | | 10 | | | | | | 10 |
| | | | 12 | | | | | | 12 |
| 12 | 15 | 13 | 12.7 | 12 | 22 | 22 | 08 | | 12.7 |
| 16 | 19 | | 15 | 15 | 27 | 27 | 10 | | 15.875 |
| | | | 16 | | | | | | 16 |
| 19 | 23 | | 19 | 19 | 33 | 33 | 13 | | 19.05 |
| | | | 20 | | | | | | 20 |
| | | | 25 | | | | | | 25 |
| 25 | 31 | | 25 | 25 | 44 | | | | 25.4 |
| | | | 32 | | | | | | 32 |

Tool Holder Clamping Type

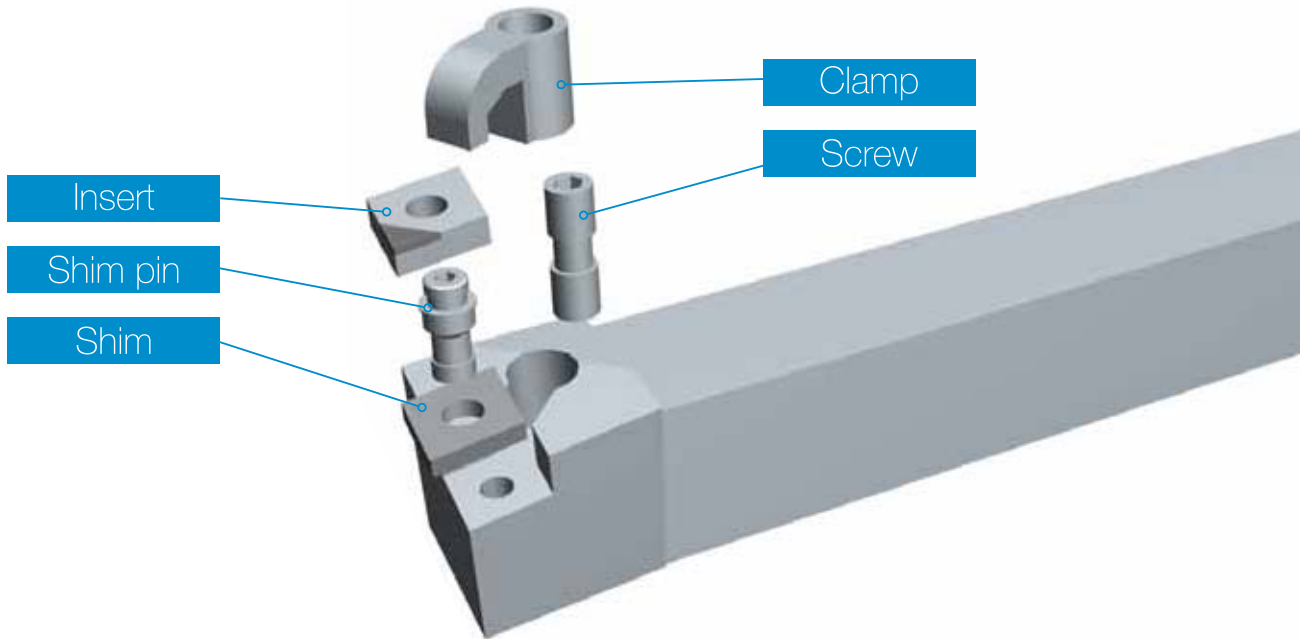
Double clamping



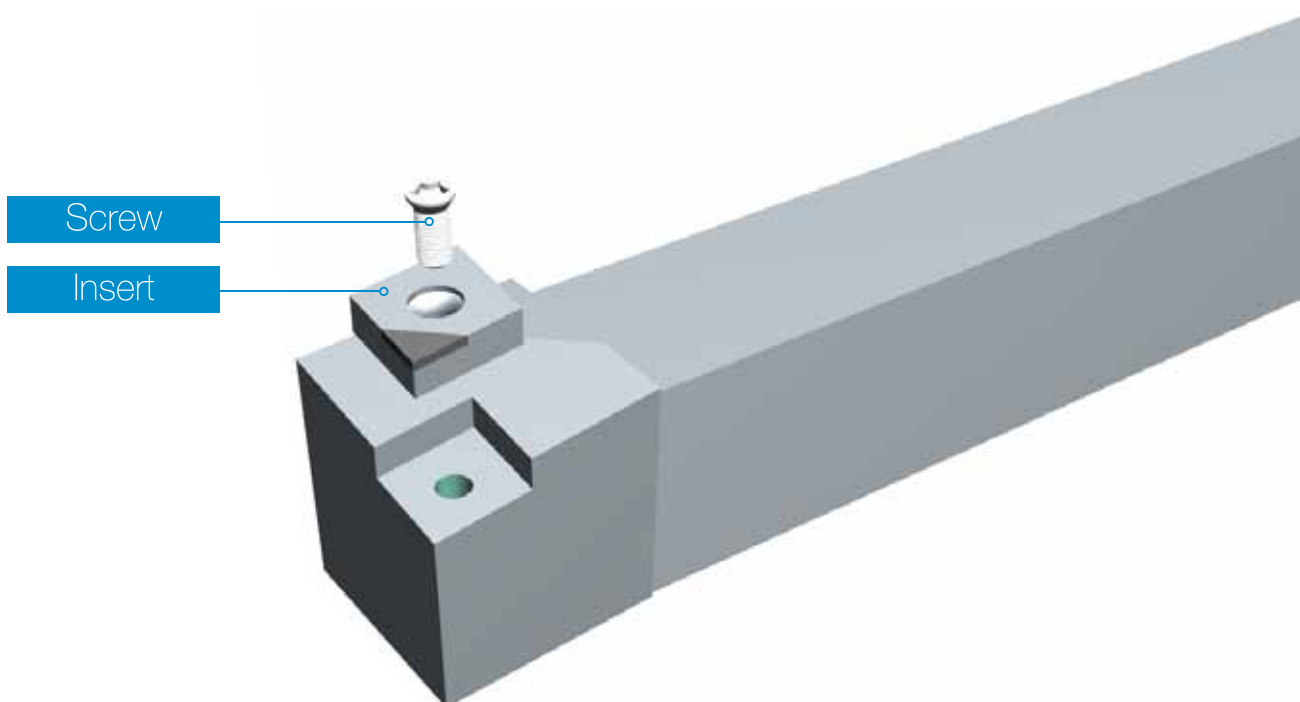
Lever locking



Multi locking



Screw clamping



Application Of Holders

| Edge/angle | 75° SN□□ type | 75° SC□□ type | 90° TN□□ type | 90° TC□□ type | 95° CN□□ type | 95° WN□□ type |
|------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Turning | | | | | | |
| D type | | | DTFN : 77p | | DCLN : 75p | DWLN : 78p |
| P type | | | PTFN : 81p | | PCLN : 79p | PWLN : 82p |
| M type | MSKN : 119p | | MTFN : 86p | | MCCN : 83p | MWLN : 88p |
| S type | | SSKC : 91p | | STFC : 92p | | |

| Edge/angle | 90° WC□□ type | 107.5° SC□□ type | 117.5° VN□□ type | RC□□ type | RC□□ type | 45° SN□□ type |
|------------|---------------|------------------|------------------|------------|-------------|---------------|
| Turning | | | | | | |
| D type | | | | | | DSDNN : 76p |
| P type | | | | | | PSDNN : 80p |
| M type | | MDQN : 83p | MVQN : 87p | | | |
| S type | | | | SRCG : 90p | SRDCN : 90p | |

| Edge/ angle | 60° TC□□ type | 75° SN□□ type | 75° SC□□ type | 93° TN□□ type | 90° TN□□ type | 90° TC□□ type |
|----------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Turning | | | | | | |
| D type | | DSBN : 76p | | | DTGN : 77p | |
| P type | | PSBN : 80p | | | PTGN : 82p | |
| M type | | MSRN : 85p | | MTJN : 86p | | |
| S type | STTC : 93p | | SSBC : 91p | | | STGC : 93p |

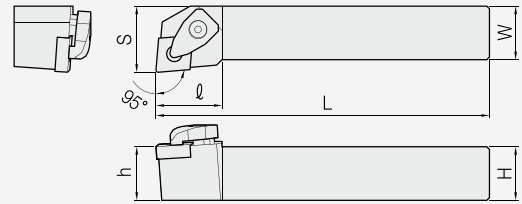
| Edge/ angle | 45° SN□□ type | 75° SN□□ type | 93° DN□□ type | 93° VN□□ type | 62.5° DN□□ type | 72.5° VN□□ type |
|----------------|---------------|---------------|---------------|---------------|-----------------|-----------------|
| Turning | | | | | | |
| D type | DSSN : 77p | DSKN : 76p | DDJN : 75p | DVJN : 78p | | DVJN : 78p |
| P type | PSSN : 81p | | PDJN : 79p | | PDMN : 80p | |
| M type | MSSN : 85p | MSKN : 84p | MDJN : 84p | MVJN : 87p | MDNPN : 61p | MVJN : 87p |
| S type | | | | | | |



DCLN^{R/L}

Double Clamping

+ **CN**□□

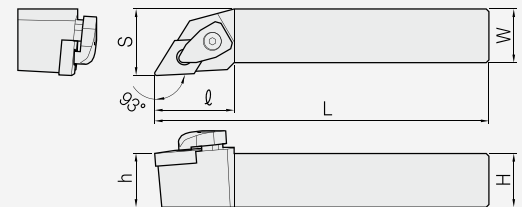


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Screw | Spring | Wrench |
|------------|---------------------|-----------------|----|-----|----|----|----|-------|-------------|-------|------------|-----------|--------|
| | | H | W | L | S | h | φ | | | | | | |
| CN□□1204□□ | EH-DCLN R/L 2020-12 | 20 | 20 | 125 | 25 | 20 | 30 | DCL4 | DCS0518 | DSC44 | DSCR0410 | DSPPR0714 | W30P |
| | 2525-12 | 25 | 25 | 150 | 32 | 25 | 30 | | | | | | |
| | 3225-12 | 32 | 25 | 170 | 32 | 32 | 30 | | | | | | |
| | 3232-12 | 32 | 32 | 170 | 40 | 32 | 30 | | | | | | |

DDJN^{R/L}

Double Clamping

+ **DN**□□

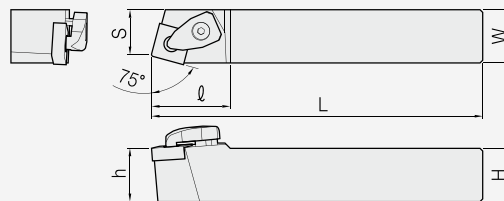


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Screw | Spring | Wrench |
|------------|-----------------------|-----------------|----|-----|----|----|----|-------|-------------|-------|------------|-----------|--------|
| | | H | W | L | S | h | φ | | | | | | |
| DN□□1104□□ | EH-DDJN R/L 2020-11 | 20 | 20 | 125 | 25 | 20 | 30 | DCL3 | DCS0415 | DSD32 | DSCR0307 | DSPPR0510 | W25P |
| | 2525-11 | 25 | 25 | 150 | 32 | 25 | 30 | | | | | | |
| | 3225-11 | 32 | 25 | 170 | 32 | 32 | 30 | | | | | | |
| | 3232-11 | 32 | 32 | 170 | 40 | 32 | 30 | | | | | | |
| DN□□1506□□ | EH-DDJN R/L 2020-15 | 20 | 20 | 125 | 25 | 20 | 35 | DCL4 | DCS0518 | DSD43 | DSCR0410 | DSPPR0714 | W30P |
| | 2525-15 | 25 | 25 | 150 | 32 | 25 | 35 | | | | | | |
| | 3225-15 | 32 | 25 | 170 | 32 | 32 | 35 | | | | | | |
| | 3232-15 | 32 | 32 | 170 | 40 | 32 | 35 | | | | | | |
| DN□□1504□□ | EH-DDJN R/L 2020-15-3 | 20 | 20 | 125 | 25 | 20 | 35 | DCL4 | DCS0518 | DSD44 | DSCR0410 | DSPPR0714 | W30P |
| | 2525-15-3 | 25 | 25 | 150 | 32 | 25 | 35 | | | | | | |
| | 3232-15-3 | 32 | 32 | 170 | 40 | 32 | 35 | | | | | | |

DSBN^{R/L}

Double Clamping

+ SN □□ □

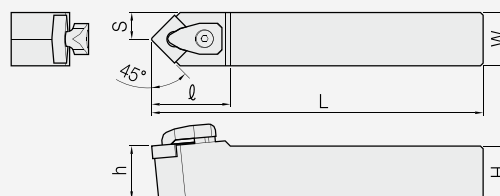


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Screw | Spring | Wrench |
|------------|---------------------|-----------------|----|-----|----|----|----|-------|-------------|-------|------------|-----------|--------|
| | | H | W | L | S | h | ℓ | | | | | | |
| SN□□0903□□ | EH-DSBN R/L 2020-09 | 20 | 20 | 125 | 17 | 20 | 25 | DCL3 | DCS0415 | DSS32 | DSCR0307 | DSPPR0510 | W25P |
| | 2525-09 | 25 | 25 | 150 | 22 | 25 | 25 | | | | | | |
| SN□□1204□□ | EH-DSBN R/L 2020-12 | 20 | 20 | 125 | 17 | 20 | 32 | DCL4 | DCS0518 | DSS44 | DSCR0410 | DSPPR0714 | W30P |
| | 2525-12 | 25 | 25 | 150 | 22 | 25 | 32 | | | | | | |
| | 3225-12 | 32 | 25 | 170 | 22 | 32 | 32 | | | | | | |
| | 3232-12 | 32 | 32 | 170 | 27 | 32 | 32 | | | | | | |

DSDNN

Double Clamping

+ SN □□ □

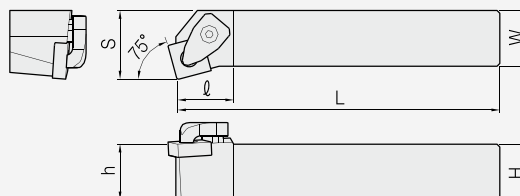


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Screw | Spring | Wrench |
|------------|------------------|-----------------|----|-----|------|----|------|-------|-------------|-------|------------|-----------|--------|
| | | H | W | L | S | h | ℓ | | | | | | |
| SN□□0903□□ | EH-DSDNN 2020-09 | 20 | 20 | 125 | 10 | 20 | 26.5 | DCL3 | DCS0415 | DSS32 | DSCR0307 | DSPPR0510 | W25P |
| | EH-DSDNN 2020-12 | 20 | 20 | 125 | 10 | 20 | 33 | | | | | | |
| SN□□1204□□ | 2525-12 | 25 | 25 | 150 | 12.5 | 25 | 33 | DCL4 | DCS0518 | DSS44 | DSCR0410 | DSPPR0714 | W30P |
| | 3225-12 | 32 | 25 | 170 | 12.5 | 32 | 33 | | | | | | |
| | 3232-12 | 32 | 32 | 170 | 16 | 32 | 33 | | | | | | |

DSKN^{R/L}

Double Clamping

+ SN □□ □

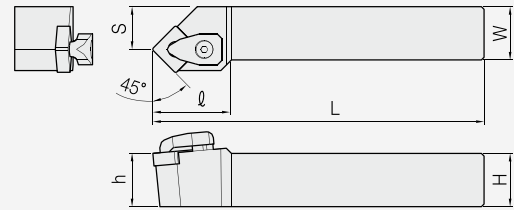


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Screw | Spring | Wrench |
|------------|---------------------|-----------------|----|-----|----|----|----|-------|-------------|-------|------------|-----------|--------|
| | | H | W | L | S | h | ℓ | | | | | | |
| SN□□0903□□ | EH-DSKN R/L 2020-09 | 20 | 20 | 125 | 25 | 20 | 20 | DCL3 | DCS0415 | DSS32 | DSCR0307 | DSPPR0510 | W25P |
| | EH-DSKN R/L 2020-12 | 20 | 20 | 125 | 25 | 20 | 23 | | | | | | |
| SN□□1204□□ | 2525-12 | 25 | 25 | 150 | 32 | 25 | 23 | DCL4 | DCS0518 | DSS44 | DSCR0410 | DSPPR0714 | W30P |
| | 3232-12 | 32 | 32 | 170 | 40 | 32 | 23 | | | | | | |

DSSN^{R/L}

Double Clamping

+ **SN**□□

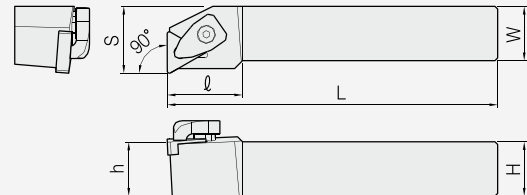


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Screw | Spring | Wrench |
|------------|---------------------|-----------------|----|-----|----|----|------|-------|-------------|-------|------------|-----------|--------|
| | | H | W | L | S | h | ℓ | | | | | | |
| SN□□0903□□ | EH-DSSN R/L 2020-09 | 20 | 20 | 125 | 25 | 20 | 28.5 | DCL3 | DCS0415 | DSS32 | DSCR0307 | DSPPR0510 | W25P |
| | EH-DSSN R/L 2020-12 | 20 | 20 | 125 | 25 | 20 | 35 | DCL4 | DCS0518 | DSS44 | DSCR0410 | DSPPR0714 | W30P |
| | 2525-12 | 25 | 25 | 150 | 32 | 25 | 35 | | | | | | |
| SN□□1204□□ | 3225-12 | 32 | 25 | 170 | 32 | 32 | 35 | | | | | | |
| | 3232-12 | 32 | 32 | 170 | 40 | 32 | 35 | | | | | | |

DTFN^{R/L}

Double Clamping

+ **TN**□□

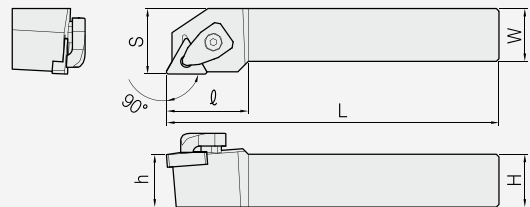


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Screw | Spring | Wrench |
|------------|---------------------|-----------------|----|-----|----|----|------|-------|-------------|-------|------------|-----------|--------|
| | | H | W | L | S | h | ℓ | | | | | | |
| TN□□1604□□ | EH-DTFN R/L 2020-16 | 20 | 20 | 125 | 25 | 20 | 24.5 | DCL3 | DCS0415 | DST32 | DSCR0307 | DSPPR0510 | W25P |
| | 2525-16 | 25 | 25 | 150 | 32 | 25 | 24.5 | | | | | | |
| | 3232-16 | 32 | 32 | 170 | 40 | 32 | 23.5 | | | | | | |
| TN□□2204□□ | EH-DTFN R/L 2525-22 | 25 | 25 | 150 | 32 | 25 | 33 | DCL4 | DCS0518 | DST44 | DSCR0410 | DSPPR0714 | W30P |
| | 3225-22 | 32 | 25 | 170 | 32 | 32 | 33 | | | | | | |
| | 3232-22 | 32 | 32 | 170 | 40 | 32 | 33 | | | | | | |

DTGN^{R/L}

Double Clamping

+ **TN**□□

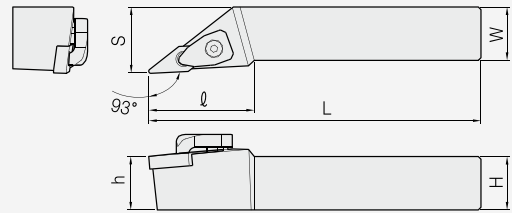


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Screw | Spring | Wrench |
|------------|---------------------|-----------------|----|-----|----|----|------|-------|-------------|-------|------------|-----------|--------|
| | | H | W | L | S | h | ℓ | | | | | | |
| TN□□1604□□ | EH-DTGN R/L 2020-16 | 20 | 20 | 125 | 25 | 20 | 24.5 | DCL3 | DCS0415 | DST32 | DSCR0307 | DSPPR0510 | W25P |
| | 2525-16 | 25 | 25 | 150 | 32 | 25 | 24.5 | | | | | | |
| | 3232-16 | 32 | 32 | 170 | 40 | 32 | 23.5 | | | | | | |
| TN□□2204□□ | EH-DTGN R/L 2525-22 | 25 | 25 | 150 | 32 | 25 | 32.6 | DCL4 | DCS0518 | DST44 | DSCR0410 | DSPPR0714 | W30P |
| | 3225-22 | 32 | 25 | 170 | 32 | 32 | 32.6 | | | | | | |
| | 3232-22 | 32 | 32 | 170 | 40 | 32 | 32.6 | | | | | | |

DVJN^{R/L}

Double Clamping

+ VN□□

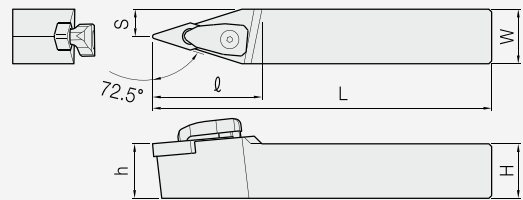


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Screw | Spring | Wrench |
|------------|---------------------|-----------------|----|-----|----|----|------|-------|-------------|-------|------------|----------|--------|
| | | H | W | L | S | h | ℓ | | | | | | |
| VN□□1604□□ | EH-DVJN R/L 2020-16 | 20 | 20 | 125 | 25 | 20 | 41.5 | | | | | | |
| | 2525-16 | 25 | 25 | 150 | 32 | 25 | 41.5 | DCL3 | DCS0518 | DSV32 | DSCR-03508 | DSPR0714 | W30P |
| | 3232-16 | 32 | 32 | 170 | 40 | 32 | 41.5 | | | | | | |

DVVNN

Double Clamping

+ VN□□

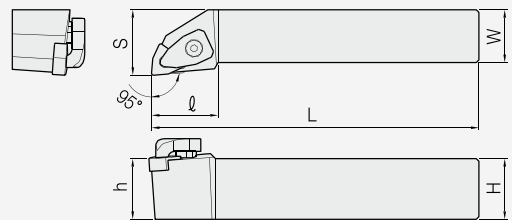


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Screw | Spring | Wrench |
|------------|-----------------|-----------------|----|-----|------|----|----|-------|-------------|-------|------------|----------|--------|
| | | H | W | L | S | h | ℓ | | | | | | |
| VN□□1604□□ | EH-DVNN 2020-16 | 20 | 20 | 125 | 10 | 20 | 40 | | | | | | |
| | 2525-16 | 25 | 25 | 150 | 12.5 | 25 | 40 | DCL3 | DCS0518 | DSV32 | DSCR-03508 | DSPR0714 | W30P |
| | 3232-16 | 32 | 32 | 170 | 16 | 32 | 40 | | | | | | |

DWLN^{R/L}

Double Clamping

+ WN□□

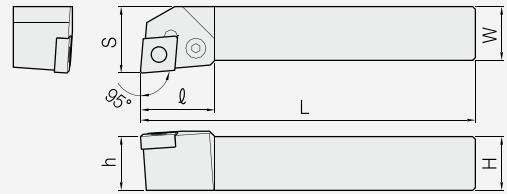


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Screw | Spring | Wrench |
|------------|---------------------|-----------------|----|-----|----|----|----|-------|-------------|-------|------------|----------|--------|
| | | H | W | L | S | h | ℓ | | | | | | |
| WN□□0604□□ | EH-DWLN R/L 2020-06 | 20 | 20 | 125 | 25 | 20 | 26 | | | | | | |
| | 2525-06 | 25 | 25 | 150 | 32 | 25 | 26 | DCL3 | DCS0415 | DSW32 | DSCR0307 | DSPR0510 | W25P |
| WN□□0804□□ | EH-DWLN R/L 2020-08 | 20 | 20 | 125 | 25 | 20 | 32 | | | | | | |
| | 2525-08 | 25 | 25 | 150 | 32 | 25 | 32 | DCL4 | DCS0518 | DSW44 | DSCR0410 | DSPR0714 | W30P |

PCLN^{R/L}

Lever Locking

+ **CN**□□

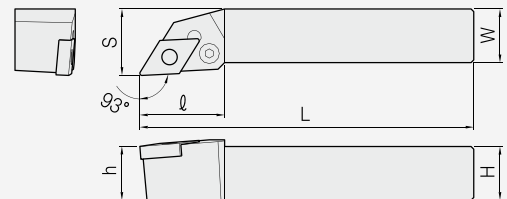


| Insert | Item No. | Dimensions (mm) | | | | | | Lever | Screw | Shim | Shim Pin | Wrench | Shim pin punch |
|------------|---------------------|-----------------|----|-----|----|----|----|-------|------------|--------|----------|--------|----------------|
| | | H | W | L | S | h | φ | | | | | | |
| CN□□0903□□ | EH-PCLN R/L 1616-09 | 16 | 16 | 100 | 20 | 16 | 20 | LV3 | LVSCR-0617 | LVSC32 | LVSP3 | W25L | LVSPS3 |
| | 2020-09 | 20 | 20 | 125 | 25 | 20 | 22 | | | | | | |
| | 2525-09 | 25 | 25 | 150 | 32 | 25 | 22 | | | | | | |
| CN□□1204□□ | EH-PCLN R/L 1616-12 | 16 | 16 | 100 | 20 | 16 | 28 | LV4 | LVSCR-0821 | LVSC42 | LVSP4 | W30L | LVSPS4 |
| | 2020-12 | 20 | 20 | 125 | 25 | 20 | 28 | | | | | | |
| | 2525-12 | 25 | 25 | 150 | 32 | 25 | 28 | | | | | | |
| | 3225-12 | 32 | 25 | 170 | 32 | 32 | 28 | | | | | | |
| | 3232-12 | 32 | 32 | 170 | 40 | 32 | 28 | | | | | | |

PDJN^{R/L}

Lever Locking

+ **DN**□□

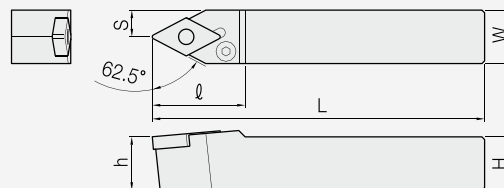


| Insert | Item No. | Dimensions (mm) | | | | | | Lever | Screw | Shim | Shim Pin | Wrench | Shim pin punch |
|------------|-----------------------|-----------------|----|-----|----|----|----|-------|------------|---------|----------|--------|----------------|
| | | H | W | L | S | h | φ | | | | | | |
| DN□□1104□□ | EH-PDJN R/L 1616-11 | 16 | 16 | 100 | 20 | 16 | 25 | LV3 | LVSCR-0617 | LVSD317 | LVSP3 | W25L | LVSPS3 |
| | 2020-11 | 20 | 20 | 125 | 25 | 20 | 25 | | | | | | |
| | 2525-11 | 25 | 25 | 150 | 32 | 25 | 30 | | | | | | |
| DN□□1506□□ | EH-PDJN R/L 2020-15 | 20 | 20 | 125 | 25 | 20 | 35 | LV4B | LVSCR-0821 | LVSD42 | LVSP4 | W30L | LVSPS4 |
| | 2525-15 | 25 | 25 | 150 | 32 | 25 | 35 | | | | | | |
| | 3225-15 | 32 | 25 | 170 | 32 | 32 | 35 | | | | | | |
| | 3232-15 | 32 | 32 | 170 | 40 | 32 | 35 | | | | | | |
| DN□□1504□□ | EH-PDJN R/L 2020-15-3 | 20 | 20 | 125 | 25 | 20 | 35 | LV4 | LVSCR-0821 | LVSD42 | LVSP4 | W30L | LVSPS4 |
| | 2525-15-3 | 25 | 25 | 150 | 32 | 25 | 35 | | | | | | |
| | 3232-15-3 | 32 | 32 | 170 | 40 | 32 | 35 | | | | | | |

PDNN^{R/L}

Lever Locking

+ **DN**□□

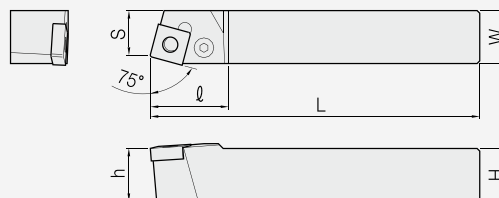


| Insert | Item No. | Dimensions (mm) | | | | | | Lever | Screw | Shim | Shim Pin | Wrench | Shim pin punch |
|------------|-----------------------|-----------------|----|-----|------|----|----|-------|------------|--------|----------|--------|----------------|
| | | H | W | L | S | h | ℓ | | | | | | |
| DN□□1506□□ | EH-PDNN R/L 2020-15 | 20 | 20 | 125 | 8 | 20 | 37 | LV4B | LVSCR-0821 | LVSD42 | LVSP4 | W30L | LVSPS4 |
| | 2525-15 | 25 | 25 | 150 | 12.5 | 25 | 37 | | | | | | |
| | 3232-15 | 32 | 32 | 150 | 16 | 32 | 37 | | | | | | |
| | 4025-15 | 40 | 25 | 170 | 12.5 | 32 | 37 | | | | | | |
| DN□□1504□□ | EH-PDNN R/L 2525-15-3 | 25 | 25 | 150 | 12.5 | 25 | 37 | LV4 | LVSCR-0821 | LVSD42 | LVSP4 | W30L | LVSPS4 |
| | 4025-15-3 | 40 | 25 | 150 | 12.5 | 25 | 37 | | | | | | |

PSBN^{R/L}

Lever Locking

+ **SN**□□

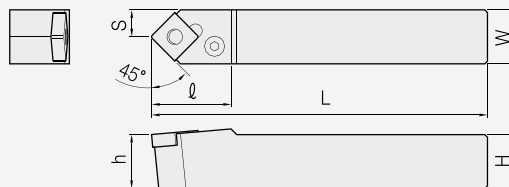


| Insert | Item No. | Dimensions (mm) | | | | | | Lever | Screw | Shim | Shim Pin | Wrench | Shim pin punch |
|------------|---------------------|-----------------|----|-----|----|----|----|-------|------------|--------|----------|--------|----------------|
| | | H | W | L | S | h | ℓ | | | | | | |
| SN□□0903□□ | EH-PSBN R/L 1616-09 | 16 | 16 | 100 | 13 | 16 | 21 | LV3 | LVSCR-0617 | LVSS32 | LVSP3 | W25L | LVSPS3 |
| | 2020-09 | 20 | 20 | 125 | 17 | 20 | 23 | | | | | | |
| SN□□1204□□ | EH-PSBN R/L 2020-12 | 20 | 20 | 125 | 17 | 20 | 28 | LV4 | LVSCR-0821 | LVSS42 | LVSP4 | W30L | LVSPS4 |
| | 2525-12 | 25 | 25 | 150 | 22 | 25 | 28 | | | | | | |
| | 3225-12 | 32 | 32 | 170 | 22 | 32 | 28 | | | | | | |
| | 3232-12 | 32 | 32 | 170 | 27 | 32 | 28 | | | | | | |

PSDNN

Lever Locking

+ **SN**□□

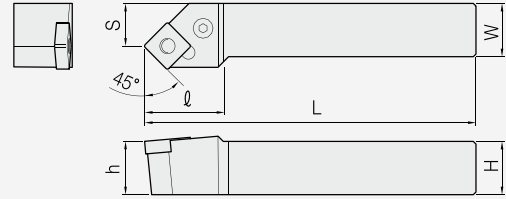


| Insert | Item No. | Dimensions (mm) | | | | | | Lever | Screw | Shim | Shim Pin | Wrench | Shim pin punch |
|------------|------------------|-----------------|----|-----|------|----|----|-------|------------|--------|----------|--------|----------------|
| | | H | W | L | S | h | ℓ | | | | | | |
| SN□□0903□□ | EH-PSDNN 1616-09 | 16 | 16 | 100 | 13 | 16 | 21 | LV3 | LVSCR0617 | LVSS32 | LVSP3 | W25L | LVSPS3 |
| SN□□1204□□ | EH-PSDNN 2020-12 | 20 | 20 | 125 | 10 | 20 | 30 | LV4 | LVSCR-0821 | LVSS42 | LVSP4 | W30L | LVSPS4 |
| | 2525-12 | 25 | 25 | 150 | 12.5 | 25 | 30 | | | | | | |
| | 3232-12 | 32 | 32 | 170 | 16 | 32 | 40 | | | | | | |

PSSN^{R/L}

Lever Locking

+ **SN**□□

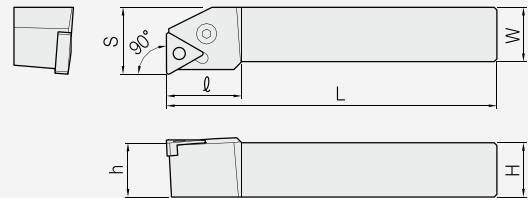


| Insert | Item No. | Dimensions (mm) | | | | | | Lever | Screw | Shim | Shim Pin | Wrench | Shim pin punch |
|------------|---------------------|-----------------|-----|-----|----|----|----|-------|------------|--------|----------|--------|----------------|
| | | H | W | L | S | h | ℓ | | | | | | |
| SN□□0903□□ | EH-PSSN R/L 1616-09 | 16 | 18 | 100 | 20 | 16 | 25 | LV3 | LVSCR0617 | LVSS32 | LVSP10 | W25L | LVSPS3 |
| | EH-PSSN R/L 2020-12 | 20 | 20 | 125 | 25 | 20 | 30 | LV4 | LVSCR-0821 | LVSS42 | LVSP4 | W30L | LVSPS4 |
| | 2525-12 | 25 | 25 | 150 | 32 | 25 | 36 | | | | | | |
| 3232-12 | 32 | 32 | 170 | 40 | 32 | 40 | | | | | | | |

PTFN^{R/L}

Lever Locking

+ **TN**□□

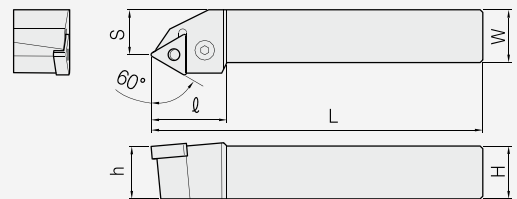


| Insert | Item No. | Dimensions (mm) | | | | | | Lever | Screw | Shim | Shim Pin | Wrench | Shim pin punch |
|------------|---------------------|-----------------|----|-----|----|----|----|-------|------------|---------|----------|--------|----------------|
| | | H | W | L | S | h | ℓ | | | | | | |
| TN□□1604□□ | EH-PTFN R/L 1616-16 | 16 | 16 | 100 | 20 | 16 | 20 | LV3 | LVSCR-0617 | LVST317 | LVSP3 | W25L | LVSPS3 |
| | 2020-16 | 20 | 20 | 125 | 25 | 20 | 20 | | | | | | |
| | 2525-16 | 25 | 25 | 150 | 32 | 25 | 20 | | | | | | |
| TN□□2204□□ | EH-PTFN R/L 2525-22 | 25 | 25 | 150 | 32 | 25 | 25 | LV4 | LVSCR-0821 | LVST42 | LVSP4 | W30L | LVSPS4 |
| | 3232-22 | 32 | 32 | 170 | 40 | 32 | 25 | | | | | | |

PTTN^{R/L}

Lever Locking

+ **TN**□□

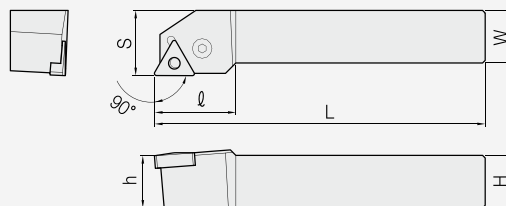


| Insert | Item No. | Dimensions (mm) | | | | | | Lever | Screw | Shim | Shim Pin | Wrench | Shim pin punch |
|------------|---------------------|-----------------|----|-----|----|----|----|-------|------------|---------|----------|--------|----------------|
| | | H | W | L | S | h | ℓ | | | | | | |
| TN□□1604□□ | EH-PTTN R/L 1616-16 | 16 | 16 | 100 | 13 | 16 | 25 | LV3 | LVSCR-0617 | LVST317 | LVSP3 | W25L | LVSPS3 |
| | 2020-16 | 20 | 20 | 125 | 17 | 20 | 25 | | | | | | |
| | 2525-16 | 25 | 25 | 150 | 22 | 25 | 32 | | | | | | |
| TN□□2204□□ | EH-PTTN R/L 2525-22 | 25 | 25 | 150 | 22 | 25 | 32 | LV4 | LVSCR-0821 | LVST42 | LVSP4 | W30L | LVSPS4 |

PTGN^{R/L}

Lever Locking

+ **TN**□□

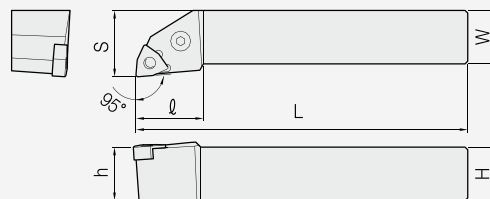


| Insert | Item No. | Dimensions (mm) | | | | | | Lever | Screw | Shim | Shim Pin | Wrench | Shim pin punch |
|------------|---------------------|-----------------|----|-----|----|----|----|-------|-------------|---------|----------|--------|----------------|
| | | H | W | L | S | h | l | | | | | | |
| TN□□1103□□ | EH-PTGN R/L 1212-11 | 12 | 12 | 80 | 16 | 12 | 16 | LV2 | LVSCR-0509B | - | - | W20L | - |
| | 1616-11 | 16 | 16 | 100 | 20 | 16 | 18 | | | | | | |
| | 2020-11 | 20 | 20 | 125 | 25 | 20 | 19 | | | | | | |
| | 2525-11 | 25 | 25 | 150 | 32 | 25 | 20 | | | | | | |
| TN□□1604□□ | EH-PTGN R/L 1616-16 | 16 | 16 | 100 | 20 | 16 | 20 | LV3 | LVSCR-0617 | LVST317 | LVSP3 | W25L | LVSPS3 |
| | 2020-16 | 20 | 20 | 125 | 25 | 20 | 20 | | | | | | |
| | 2525-16 | 25 | 25 | 150 | 32 | 25 | 20 | | | | | | |
| | 3232-16 | 32 | 32 | 170 | 40 | 32 | 20 | | | | | | |
| TN□□2204□□ | EH-PTGN R/L 2525-22 | 25 | 25 | 150 | 32 | 25 | 28 | LV4 | LVSCR-0821 | LVST42 | LVSP4 | W30L | LVSPS4 |
| | 3232-22 | 32 | 32 | 170 | 40 | 32 | 28 | | | | | | |

PWLN^{R/L}

Lever Locking

+ **WN**□□

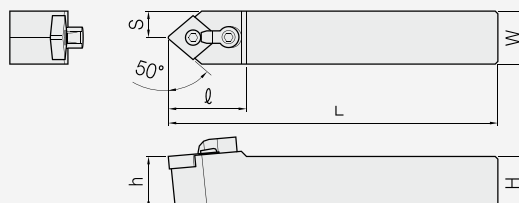


| Insert | Item No. | Dimensions (mm) | | | | | | Lever | Screw | Shim | Shim Pin | Wrench | Shim pin punch |
|------------|---------------------|-----------------|----|-----|----|----|----|-------|------------|----------|----------|--------|----------------|
| | | H | W | L | S | h | l | | | | | | |
| WN□□0604□□ | EH-PWLN R/L 1616-06 | 16 | 16 | 100 | 20 | 16 | 20 | LV3 | LVSCR-0617 | LVSW-317 | LVSP3 | W25L | LVSPS3 |
| | 2020-06 | 20 | 20 | 125 | 25 | 20 | 20 | | | | | | |
| | 2525-06 | 25 | 25 | 150 | 32 | 25 | 20 | | | | | | |
| WN□□0804□□ | EH-PWLN R/L 2020-08 | 20 | 20 | 125 | 25 | 20 | 26 | LV4 | LVSCR-0821 | LVSW42 | LVSP4 | W30L | LVSPS4 |
| | 2525-08 | 25 | 25 | 150 | 32 | 25 | 26 | | | | | | |

MCMNN

Multi Locking

+ **CN**□□

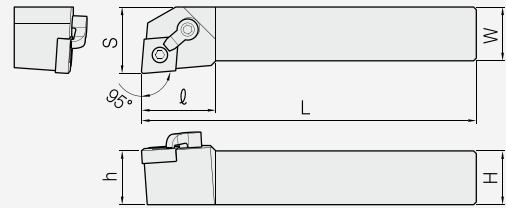


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Pin | Wrench |
|------------|------------------|-----------------|----|-----|------|----|----|-------|--------------|-------|----------|------------------|
| | | H | W | L | S | h | l | | | | | |
| CN□□1204□□ | EH-MCMNN 2020-12 | 20 | 20 | 125 | 10 | 20 | 32 | MCL6N | MCSCR-1/4-25 | MSC43 | MSP4D | W31.8L W23.8L |
| | 2525-12 | 25 | 25 | 150 | 12.5 | 25 | 32 | | | | | |
| | 3232-12 | 32 | 32 | 170 | 16 | 32 | 32 | | | | | |

MCLN^{R/L}

Multi Locking

+ **CN**□□

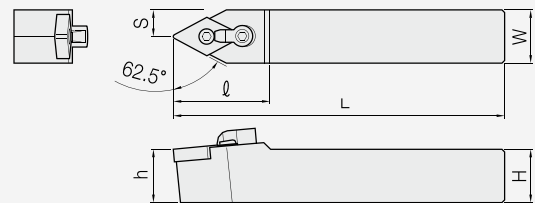


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Pin | Wrench |
|------------|---------------------|-----------------|----|-----|----|----|----|-------|----------------|-------|----------|------------------|
| | | H | W | L | S | h | ℓ | | | | | |
| CN□□0903□□ | EH-MCLN R/L 1616-09 | 16 | 16 | 100 | 20 | 16 | 25 | MCL7N | MCSCR-10-32-19 | MSC32 | MSP3DS | W23.8L W19.8L |
| | 2020-09 | 20 | 20 | 125 | 25 | 20 | 25 | | | | | |
| | 2525-09 | 25 | 25 | 150 | 32 | 25 | 25 | | | | | |
| CN□□1204□□ | EH-MCLN R/L 2020-12 | 20 | 20 | 125 | 25 | 20 | 32 | MCL6N | MCSCR-1/4-25 | MSC43 | MSP4D | W31.8L W23.8L |
| | 2525-12 | 25 | 25 | 150 | 32 | 25 | 32 | | | | | |
| | 3225-12 | 32 | 25 | 170 | 32 | 32 | 32 | | | | | |
| | 3232-12 | 32 | 32 | 170 | 40 | 32 | 32 | | | | | |

MDNNN

Multi Locking

+ **DN**□□

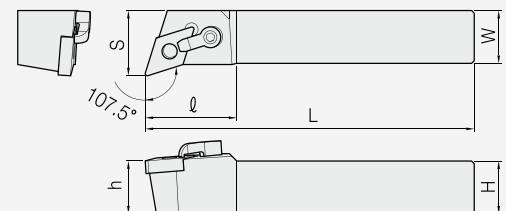


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Pin | Wrench |
|------------|--------------------|-----------------|----|-----|------|----|----|-------|---------------|-------|----------|------------------|
| | | H | W | L | S | h | ℓ | | | | | |
| DN□□1504□□ | EH-MDNNN 2525-15-3 | 25 | 25 | 150 | 12.5 | 25 | 41 | MCL8N | MCSCR-5/16-32 | MSD43 | MSP4D | W39.7L W23.8L |
| DN□□1506□□ | EH-MDNNN 2525-15 | 25 | 25 | 150 | 12.5 | 25 | 41 | MCL8N | MCSCR-5/16-32 | MSD43 | MSP4DL | W39.7L W23.8L |

MDQN^{R/L}

Multi Locking

+ **DN**□□

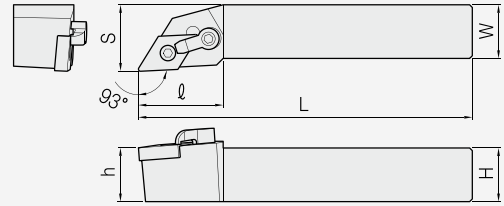


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Pin | Wrench |
|------------|-----------------------|-----------------|----|-----|----|----|----|-------|--------------|-------|----------|------------------|
| | | H | W | L | S | h | ℓ | | | | | |
| DN□□1504□□ | EH-MDQN R/L 2525-15-3 | 25 | 25 | 150 | 32 | 25 | 36 | MCL6N | MCSCR-1/4-25 | MSD43 | MSP4D | W31.8L W23.8L |
| | 3232-15-3 | 32 | 32 | 170 | 40 | 32 | 36 | | | | | |
| DN□□1506□□ | EH-MDQN R/L 2525-15 | 25 | 25 | 150 | 32 | 25 | 36 | MCL6N | MCSCR-1/4-25 | MSD43 | MSP4DL | W31.8L W23.8L |
| | 3232-15 | 32 | 32 | 170 | 40 | 32 | 36 | | | | | |

MDJN^{R/L}

Multi Locking

+ **DN**□□□

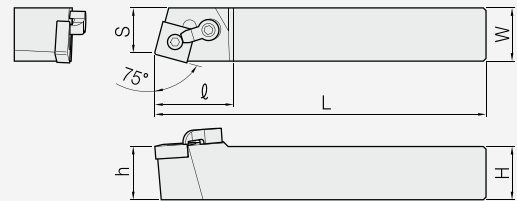


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Pin | Wrench |
|------------|-----------------------|-----------------|----|-----|----|----|----|-------|--------------|-------|----------|------------------|
| | | H | W | L | S | h | ℓ | | | | | |
| DN□□1104□□ | EH-MDJN R/L 2020-11 | 20 | 20 | 125 | 25 | 20 | 32 | MCL6N | MCSCR-1/4-19 | MSD32 | MSP3D | W31.8L W19.8L |
| | 2525-11 | 25 | 25 | 150 | 32 | 25 | 32 | | | | | |
| DN□□1504□□ | EH-MDJN R/L 2020-15-3 | 20 | 20 | 125 | 25 | 20 | 36 | MCL6N | MCSCR-1/4-25 | MSD43 | MSP4D | W31.8L W23.8L |
| | 2525-15-3 | 25 | 25 | 150 | 32 | 25 | 36 | | | | | |
| | 3232-15-3 | 32 | 32 | 170 | 40 | 32 | 36 | | | | | |
| DN□□1506□□ | EH-MDJN R/L 2020-15 | 20 | 20 | 125 | 25 | 20 | 36 | MCL6N | MCSCR-1/4-25 | MSD43 | MSP4DL | W31.8L W23.8L |
| | 2525-15 | 25 | 25 | 150 | 32 | 25 | 36 | | | | | |
| | 3232-15 | 32 | 32 | 170 | 40 | 32 | 36 | | | | | |

MSBN^{R/L}

Multi Locking

+ **SN**□□□

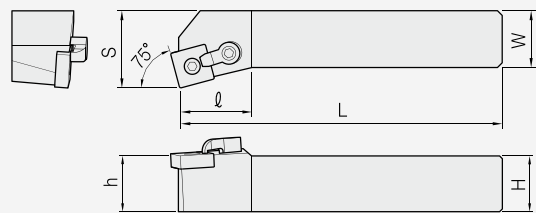


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Pin | Wrench |
|------------|---------------------|-----------------|----|-----|----|----|----|--------|---------------|-------|----------|------------------|
| | | H | W | L | S | h | ℓ | | | | | |
| SN□□1204□□ | EH-MSBN R/L 2020-12 | 20 | 20 | 125 | 17 | 20 | 32 | MCL8N1 | MCSCR-5/16-32 | MSS43 | MSP4D | W39.7L W23.8L |
| | 2525-12 | 25 | 25 | 150 | 22 | 25 | 32 | | | | | |

MSKN^{R/L}

Multi Locking

+ **SN**□□□

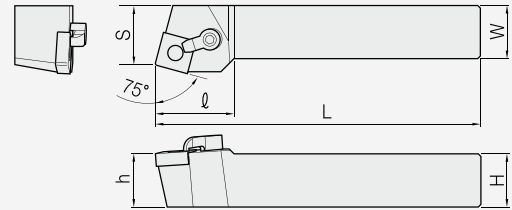


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Pin | Wrench |
|------------|---------------------|-----------------|----|-----|----|----|----|--------|----------------|-------|----------|------------------|
| | | H | W | L | S | h | ℓ | | | | | |
| SN□□0903□□ | EH-MSKN R/L 1616-09 | 16 | 16 | 100 | 20 | 16 | 28 | MCL7N | MCSCR-10-32-19 | MSS32 | MSP3DS | W19.8L W23.8L |
| | 2020-09 | 20 | 20 | 125 | 22 | 20 | 28 | | | | | |
| SN□□1204□□ | EH-MSKN R/L 2020-12 | 20 | 20 | 125 | 25 | 20 | 32 | MCL8N1 | MCSCR-5/16-32 | MSS43 | MSP4D | W39.7L W23.8L |
| | 2525-12 | 25 | 25 | 150 | 32 | 25 | 32 | | | | | |
| | 3225-12 | 32 | 32 | 170 | 32 | 32 | 32 | | | | | |

M SRN^{R/L}

Multi Locking

+ **SN** □ □

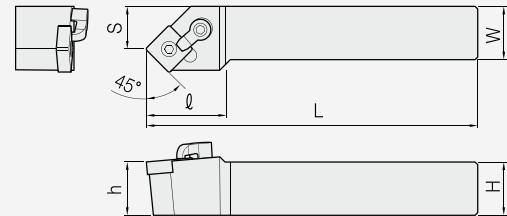


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Pin | Wrench |
|-----------------|---------------------|-----------------|----|-----|----|----|----|--------|----------------|-------|----------|------------------|
| | | H | W | L | S | h | ℓ | | | | | |
| SN □ □ 0903 □ □ | EH-MSRN R/L 1616-09 | 16 | 16 | 100 | 17 | 16 | 28 | MCL7N | MCSCR-10-32-19 | MSS32 | MSP3DS | W19.8L W23.8L |
| | 2020-09 | 20 | 20 | 125 | 22 | 20 | 28 | | | | | |
| SN □ □ 1204 □ □ | EH-MSRN R/L 2020-12 | 20 | 20 | 125 | 22 | 20 | 32 | MCL8N1 | MCSCR-5/16-32 | MSS43 | MSP4D | W39.7L W23.8L |
| | 2525-12 | 25 | 25 | 150 | 27 | 25 | 32 | | | | | |

M SSN^{R/L}

Multi Locking

+ **SN** □ □

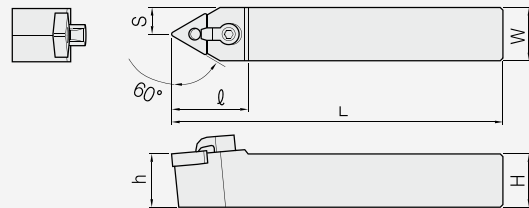


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Pin | Wrench |
|-----------------|---------------------|-----------------|----|-----|----|----|----|--------|----------------|-------|----------|------------------|
| | | H | W | L | S | h | ℓ | | | | | |
| SN □ □ 0903 □ □ | EH-MSSN R/L 1616-09 | 16 | 16 | 100 | 20 | 16 | 28 | MCL7N | MCSCR-10-32-19 | MSS32 | MSP3DS | W19.8L W23.8L |
| | 2020-09 | 20 | 20 | 125 | 25 | 20 | 28 | | | | | |
| SN □ □ 1204 □ □ | EH-MSSN R/L 2020-12 | 20 | 20 | 125 | 25 | 20 | 32 | MCL8N1 | MCSCR-5/16-32 | MSS43 | MSP4D | W39.7L W23.8L |
| | 2525-12 | 25 | 25 | 150 | 32 | 25 | 32 | | | | | |

M TENN

Multi Locking

+ **TN** □ □

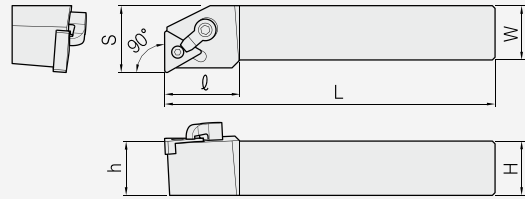


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Pin | Wrench |
|-----------------|------------------|-----------------|----|-----|------|----|----|--------|----------------|-------|----------|------------------|
| | | H | W | L | S | h | ℓ | | | | | |
| TN □ □ 1604 □ □ | EH-MTENN 2020-16 | 20 | 20 | 125 | 10 | 20 | 32 | MCL7N | MCSCR-10-32-19 | MST32 | MSP3D | W23.8L W19.8L |
| | 2525-16 | 25 | 25 | 150 | 12.5 | 25 | 32 | | | | | |
| TN □ □ 2204 □ □ | EH-MTENN 2525-22 | 25 | 25 | 150 | 12.5 | 25 | 35 | MCL8N1 | MCSCR-5/16-32 | MST43 | MSP4D | W39.7L W23.8L |

MTFN^{R/L}

Multi Locking

+ **TN** □ □ □

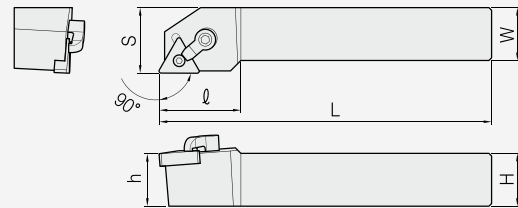


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Pin | Wrench |
|-----------------|---------------------|-----------------|----|-----|----|----|----|--------|----------------|-------|----------|------------------|
| | | H | W | L | S | h | ℓ | | | | | |
| TN □ □ 1604 □ □ | EH-MTFN R/L 1616-16 | 16 | 16 | 100 | 20 | 16 | 32 | MCL7N | MCSCR-10-32-19 | MST32 | MSP3D | W23.8L W19.8L |
| | 2020-16 | 20 | 20 | 125 | 25 | 20 | 32 | | | | | |
| | 2525-16 | 25 | 25 | 150 | 32 | 25 | 32 | | | | | |
| TN □ □ 2204 □ □ | EH-MTFN R/L 2525-22 | 25 | 25 | 150 | 32 | 25 | 32 | MCL8N1 | MCSCR-5/16-32 | MST43 | MSP4D | W39.7L W23.8L |
| | 3232-22 | 32 | 32 | 170 | 40 | 32 | 32 | | | | | |
| | 4040-22 | 40 | 40 | 250 | 50 | 40 | 32 | | | | | |

MTGN^{R/L}

Multi Locking

+ **TN** □ □ □

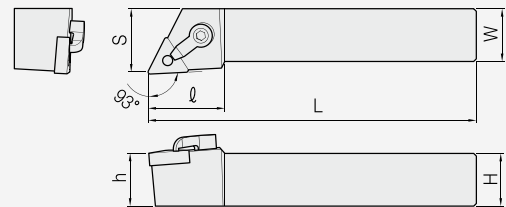


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Pin | Wrench |
|-----------------|---------------------|-----------------|----|-----|----|----|----|--------|----------------|-------|----------|------------------|
| | | H | W | L | S | h | ℓ | | | | | |
| TN □ □ 1604 □ □ | EH-MTGN R/L 1616-16 | 16 | 16 | 100 | 20 | 16 | 32 | MCL7N | MCSCR-10-32-19 | MST32 | MSP3D | W23.8L W19.8L |
| | 2020-16 | 20 | 20 | 125 | 25 | 20 | 32 | | | | | |
| | 2525-16 | 25 | 25 | 150 | 32 | 25 | 32 | | | | | |
| TN □ □ 2204 □ □ | EH-MTGN R/L 2525-22 | 25 | 25 | 150 | 32 | 25 | 32 | MCL8N1 | MCSCR-5/16-32 | MST43 | MSP4D | W39.7L W23.8L |
| | 3232-22 | 32 | 32 | 170 | 40 | 32 | 32 | | | | | |

MTJN^{R/L}

Multi Locking

+ **TN** □ □ □

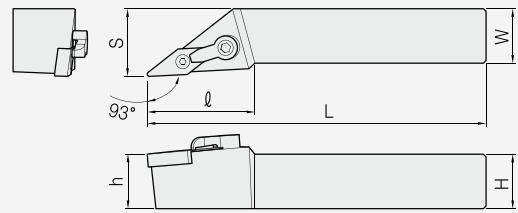


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Pin | Wrench |
|-----------------|---------------------|-----------------|----|-----|----|----|----|--------|----------------|-------|----------|------------------|
| | | H | W | L | S | h | ℓ | | | | | |
| TN □ □ 1604 □ □ | EH-MTJN R/L 2020-16 | 20 | 20 | 125 | 25 | 20 | 32 | MCL7N | MCSCR-10-32-19 | MST32 | MSP3D | W23.8L W19.8L |
| | 2525-16 | 25 | 25 | 150 | 32 | 25 | 32 | | | | | |
| TN □ □ 2204 □ □ | EH-MTJN R/L 2525-22 | 25 | 25 | 150 | 32 | 25 | 32 | MCL8N1 | MCSCR-5/16-32 | MST43 | MSP4D | W39.7L W23.8L |
| | 3232-22 | 32 | 32 | 170 | 40 | 32 | 32 | | | | | |

MVJN^{R/L}

Multi Locking

+ VN□□

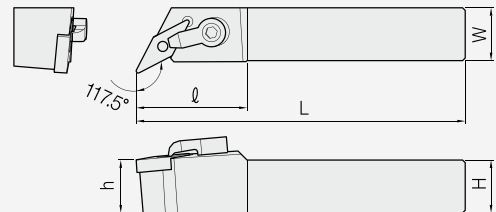


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Pin | Wrench |
|------------|---------------------|-----------------|----|-----|----|----|----|--------|---------------|-------|----------|------------------|
| | | H | W | L | S | h | ℓ | | | | | |
| VN□□1604□□ | EH-MVJN R/L 2020-16 | 20 | 20 | 125 | 25 | 20 | 37 | MCL8N1 | MCSCR-5/16-32 | MSV32 | MSP3D | W39.7L W23.8L |
| | 2525-16 | 25 | 25 | 150 | 32 | 25 | 37 | | | | | |
| | 3232-16 | 32 | 32 | 170 | 40 | 32 | 37 | | | | | |

MVQN^{R/L}

Multi Locking

+ VN□□

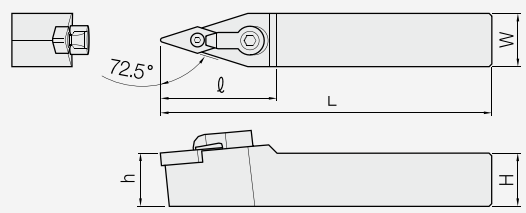


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Pin | Wrench |
|------------|---------------------|-----------------|----|-----|----|----|----|--------|-------------|-------|----------|------------------|
| | | H | W | L | S | h | ℓ | | | | | |
| VN□□1604□□ | EH-MVQN R/L 2020-16 | 20 | 20 | 125 | 25 | 20 | 42 | MCL8N2 | | MSV32 | MSP3D | W39.7L W19.8L |
| | 2525-16 | 25 | 25 | 150 | 32 | 25 | 42 | | | | | |
| | 3232-16 | 32 | 32 | 170 | 40 | 32 | 37 | | | | | |

MVVNN

Multi Locking

+ VN□□

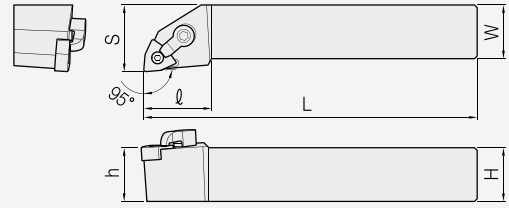


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Pin | Wrench |
|------------|------------------|-----------------|----|-----|----|----|----|--------|-------------|-------|----------|------------------|
| | | H | W | L | S | h | ℓ | | | | | |
| VN□□1604□□ | EH-MVVNN 2020-16 | 20 | 20 | 125 | 25 | 20 | 42 | MCL8N2 | | MSV32 | MSP3D | W39.7L W19.8L |
| | 2525-16 | 25 | 25 | 150 | 32 | 25 | 42 | | | | | |

MWLN^{R/L}

Multi Locking

+ **WN** □ □

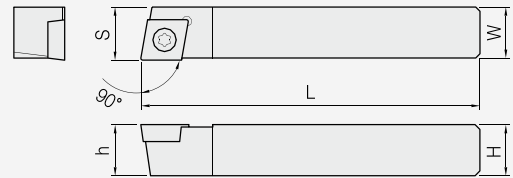


| Insert | Item No. | Dimensions (mm) | | | | | | Clamp | Clamp Screw | Shim | Shim Pin | Wrench |
|-----------------|---------------------|-----------------|----|-----|----|----|----|-------|----------------|-------|----------|--------------------|
| | | H | W | L | S | h | l | | | | | |
| WN □ □ 0604 □ □ | EH-MWLN R/L 2020-06 | 20 | 20 | 125 | 25 | 20 | 32 | MCL7N | MCSCR-10-32-19 | MSW32 | MSP3D | W23.8L W19.8L |
| | 2525-06 | 25 | 25 | 150 | 32 | 25 | 32 | | | | | |
| | 3232-06 | 32 | 32 | 170 | 40 | 32 | 32 | | | | | |
| WN □ □ 0804 □ □ | EH-MWLN R/L 2020-08 | 20 | 20 | 125 | 25 | 20 | 32 | MCL8N | MCSCR-1/4-21 | MSW43 | MSP4D | HW31.8L HW23.8L |
| | 2525-08 | 25 | 25 | 150 | 32 | 25 | 32 | | | | | |
| | 3232-08 | 32 | 32 | 170 | 40 | 32 | 32 | | | | | |

SCAC^{R/L}

Screw On

+ **CC** □ □

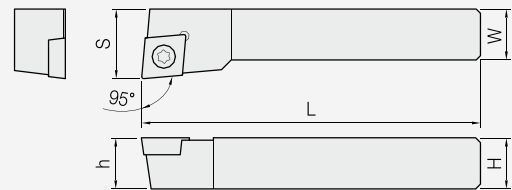


| Insert | Item No. | Dimensions (mm) | | | | | Screw | Shim | Shim Screw | Wrench |
|-----------------|---------------------|-----------------|----|----|------|----|----------|------|------------|--------|
| | | H | W | L | S | h | | | | |
| CC □ □ 0602 □ □ | EH-SCAC R/L 1010-06 | 10 | 10 | 70 | 10.5 | 10 | SCR02565 | - | - | TW07P |
| CC □ □ 09T3 □ □ | 1212-09 | 12 | 12 | 80 | 12.5 | 12 | SCR03508 | - | - | TW15P |

SCLC^{R/L}

Screw On

+ **CC** □ □

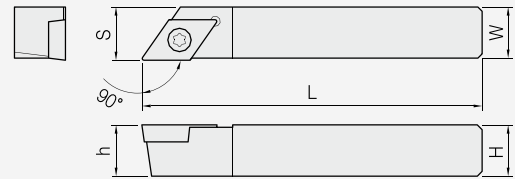


| Insert | Item No. | Dimensions (mm) | | | | | | Screw | Shim | Shim Screw | Wrench |
|-----------------|---------------------|-----------------|----|-----|----|----|----|----------|-------|------------|---------------|
| | | H | W | L | S | h | l | | | | |
| CC □ □ 0602 □ □ | EH-SCLC R/L 0808-06 | 08 | 08 | 60 | 10 | 08 | 10 | SCR02565 | - | - | TW07P |
| | 1010-06 | 10 | 10 | 70 | 16 | 10 | 10 | | | | |
| CC □ □ 09T3 □ □ | EH-SCLC R/L 1212-09 | 12 | 12 | 80 | 20 | 12 | 16 | SCR03508 | - | - | TW15P |
| | 1616-09 | 16 | 16 | 100 | 20 | 16 | 16 | | | | |
| | 2020-09 | 20 | 20 | 125 | 25 | 20 | 16 | | | | |
| CC □ □ 1204 □ □ | EH-SCLC R/L 2020-12 | 20 | 20 | 125 | 25 | 20 | 25 | SCR0411F | SSC42 | SSCR0610 | TW15P W40L |
| | 2525-12 | 25 | 25 | 150 | 32 | 25 | 26 | | | | |

SDAC^{R/L}

Screw On

+ **DC** □ □ □

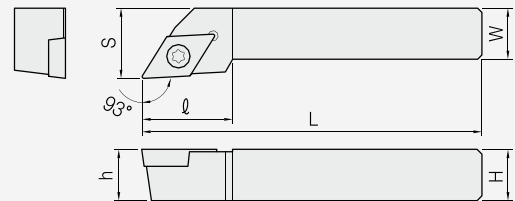


| Insert | Item No. | Dimensions (mm) | | | | | Screw | Shim | Shim Screw | Wrench |
|------------|---------------------|-----------------|----|-----|------|----|----------|-------|------------|------------|
| | | H | W | L | S | h | | | | |
| DC□□0702□□ | EH-SDAC R/L 1010-07 | 10 | 10 | 70 | 10.5 | 10 | SCR02565 | - | - | TW07P |
| | EH-SDAC R/L 1212-11 | 12 | 12 | 80 | 12.5 | 12 | SCR03508 | - | - | TW15P |
| DC□□11T3□□ | 1616-11 | 16 | 16 | 100 | 16.5 | 16 | SCR03512 | SSD32 | SSCR0509 | TW15P,W35L |

SDJC^{R/L}

Screw On

+ **DC** □ □ □

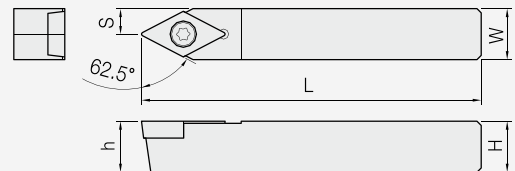


| Insert | Item No. | Dimensions (mm) | | | | | | | Screw | Shim | Shim Screw | Wrench |
|------------|---------------------|-----------------|----|-----|----|----|----|----------|-------|----------|------------|--------|
| | | H | W | L | S | h | ℓ | | | | | |
| DC□□0702□□ | EH-SDJC R/L 1010-07 | 10 | 10 | 70 | 12 | 10 | 15 | SCR02565 | - | - | TW07P | |
| | 1212-07 | 12 | 12 | 80 | 16 | 12 | 15 | | | | | |
| | 1616-07 | 16 | 16 | 100 | 20 | 16 | 18 | | | | | |
| | 2020-07 | 20 | 20 | 125 | 25 | 20 | 15 | | | | | |
| DC□□11T3□□ | EH-SDJC R/L 1212-11 | 12 | 12 | 80 | 16 | 12 | 15 | SCR03512 | SSD32 | SSCR0509 | TW15P,W35L | |
| | 1616-11 | 16 | 16 | 100 | 20 | 16 | 24 | | | | | |
| | 2020-11 | 20 | 20 | 125 | 25 | 20 | 24 | | | | | |
| | 2525-11 | 25 | 25 | 150 | 32 | 25 | 29 | | | | | |

SDNCN

Screw On

+ **DC** □ □ □

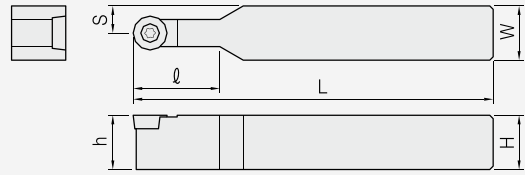


| Insert | Item No. | Dimensions (mm) | | | | | Screw | Shim | Shim Screw | Wrench |
|------------|------------------|-----------------|----|-----|----|----|----------|-------|------------|---------------|
| | | H | W | L | S | h | | | | |
| DC□□0702□□ | EH-SDNCN 1010-07 | 10 | 10 | 70 | 5 | 10 | SCR02565 | - | - | TW07P |
| | 1212-07 | 12 | 12 | 80 | 6 | 12 | | | | |
| DC□□11T3□□ | EH-SDNCN 1212-11 | 12 | 12 | 100 | 6 | 12 | SCR03508 | - | - | TW15P |
| DC□□11T3□□ | EH-SDNCN 1616-11 | 16 | 16 | 100 | 8 | 16 | SCR03512 | SSD32 | SSCR0509 | TW15P W35L |
| | 2020-11 | 20 | 20 | 125 | 10 | 20 | | | | |

SRDCN

Screw On

+ **RCGT**

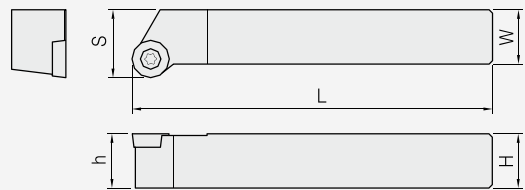


| Insert | Item No. | Dimensions (mm) | | | | | | Screw | Shim | Shim Screw | Wrench |
|-------------|------------------|-----------------|----|-----|------|----|----|-----------|-------|------------|------------|
| | | H | W | L | S | h | ℓ | | | | |
| RCGT 0602M0 | EH-SRDCN 1010-06 | 10 | 10 | 70 | 5 | 10 | 10 | SCR02565 | - | - | TW07P |
| | 1212-06 | 12 | 12 | 80 | 6 | 12 | 12 | | | | |
| | 1616-06 | 16 | 16 | 100 | 8 | 16 | 12 | | | | |
| | 2525-06 | 25 | 25 | 150 | 12.5 | 25 | 20 | | | | |
| RCGT 0803M0 | EH-SRDCN 1616-08 | 16 | 16 | 100 | 8 | 16 | 16 | SCR0307 | - | - | TW09P |
| | 2020-08 | 20 | 20 | 125 | 10 | 20 | 20 | | | | |
| | 2525-08 | 25 | 25 | 150 | 12.5 | 25 | 20 | | | | |
| RCGT 1003M0 | EH-SRDCN 1616-10 | 16 | 16 | 100 | 8 | 16 | 25 | SCR03511A | SSR10 | SSCR0509 | TW15P,W35L |
| | 2020-10 | 20 | 20 | 125 | 10 | 20 | 25 | | | | |
| | 2525-10 | 25 | 25 | 150 | 12.5 | 25 | 25 | | | | |
| RCGT 1204M0 | EH-SRDCN 2020-12 | 20 | 20 | 125 | 10 | 20 | 28 | SCR03512 | SSR12 | SSCR0509 | TW15P,W35L |
| | 2525-12 | 25 | 25 | 150 | 12.5 | 25 | 28 | | | | |

SRGC^{R/L}

Screw On

+ **RCGT**

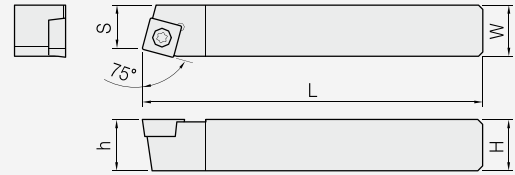


| Insert | Item No. | Dimensions (mm) | | | | | | Screw | Shim | Shim Screw | Wrench |
|-------------|---------------------|-----------------|----|-----|----|----|---|-----------|-------|------------|------------|
| | | H | W | L | S | h | ℓ | | | | |
| RCGT 0602M0 | EH-SRGC R/L 1010-06 | 10 | 10 | 70 | 12 | 10 | - | SCR02565 | - | - | TW07P |
| | 1212-06 | 12 | 12 | 80 | 16 | 12 | - | | | | |
| | 1616-06 | 16 | 16 | 100 | 20 | 16 | - | | | | |
| RCGT 0803M0 | EH-SRGC R/L 1616-08 | 16 | 16 | 100 | 20 | 16 | - | SCR0307 | - | - | TW09P |
| | 2020-08 | 20 | 20 | 125 | 25 | 20 | - | | | | |
| | 2525-08 | 25 | 25 | 150 | 32 | 25 | - | | | | |
| RCGT 1003M0 | EH-SRGC R/L 1616-10 | 16 | 16 | 100 | 20 | 16 | - | SCR03511A | SSR10 | SSCR0509 | TW15P,W35L |
| | 2020-10 | 20 | 20 | 125 | 25 | 20 | - | | | | |
| | 2525-10 | 25 | 25 | 150 | 32 | 25 | - | | | | |
| RCGT 1204M0 | EH-SRGC R/L 2020-12 | 20 | 20 | 125 | 25 | 20 | - | SCR03512 | SSR12 | SSCR0509 | TW15P,W35L |
| | 2525-12 | 25 | 25 | 150 | 32 | 25 | - | | | | |

SSBC^{R/L}

Screw On

+ **SC** □ □

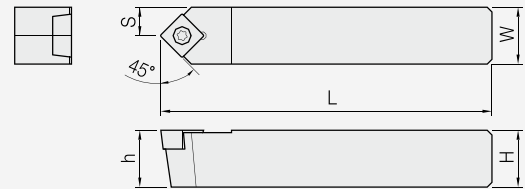


| Insert | Item No. | Dimensions (mm) | | | | | Screw | Shim | Shim Screw | Wrench |
|-----------------|---------------------|-----------------|----|-----|----|----|----------|-------|------------|------------|
| | | H | W | L | S | h | | | | |
| SC □ □ 09T3 □ □ | EH-SSBC R/L 1212-09 | 12 | 12 | 80 | 11 | 12 | SCR03508 | - | - | TW15P |
| | | 16 | 16 | 100 | 13 | 16 | SCR03512 | SSS32 | SSCR0509 | TW15P,W35L |
| SC □ □ 1204 □ □ | EH-SSBC R/L 2020-12 | 20 | 20 | 125 | 17 | 20 | SCR0411F | SSS42 | SSCR0610 | TW15P,W35L |

SSDCN

Screw On

+ **SC** □ □

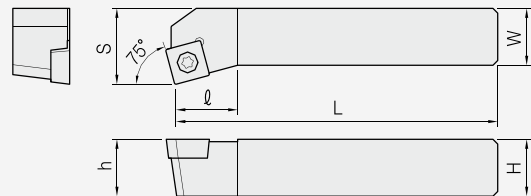


| Insert | Item No. | Dimensions (mm) | | | | | Screw | Shim | Shim Screw | Wrench |
|-----------------|------------------|-----------------|----|-----|---|----|----------|-------|------------|------------|
| | | H | W | L | S | h | | | | |
| SC □ □ 09T3 □ □ | EH-SSDCN 1212-09 | 12 | 12 | 80 | 6 | 12 | SCR03508 | - | - | TW15P |
| | | 16 | 16 | 100 | 8 | 16 | SCR03512 | SSS32 | SSCR0509 | TW15P,W35L |

SSKC^{R/L}

Screw On

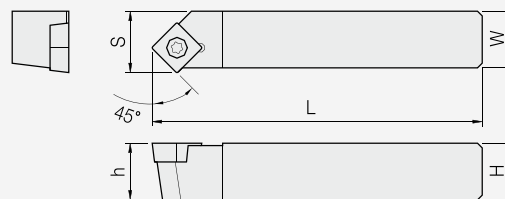
+ **SC** □ □



| Insert | Item No. | Dimensions (mm) | | | | | | Screw | Shim | Shim Screw | Wrench |
|-----------------|---------------------|-----------------|----|-----|----|----|----|----------|-------|------------|------------|
| | | H | W | L | S | h | l | | | | |
| SC □ □ 09T3 □ □ | EH-SSKC R/L 1616-09 | 16 | 16 | 100 | 20 | 16 | 13 | SCR03512 | SSS32 | SSCR0509 | TW15P,W35L |

SSSC^{R/L} Screw On

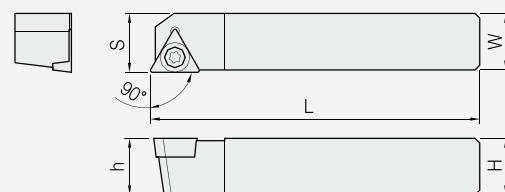
+ SC □ □



| Insert | Item No. | Dimensions (mm) | | | | | Screw | Shim | Shim Screw | Wrench |
|-----------------|---------------------|-----------------|----|-----|----|----|----------|-------|------------|------------|
| | | H | W | L | S | h | | | | |
| SC □ □ 09T3 □ □ | EH-SSSC R/L 1616-09 | 16 | 16 | 100 | 17 | 16 | SCR03512 | SSS32 | SSCR0509 | TW15P,W35L |
| SC □ □ 1204 □ □ | 2020-12 | 20 | 20 | 125 | 21 | 20 | SCR0411F | SSS42 | SSCR0610 | TW15P,W40L |

STAC^{R/L} Screw On

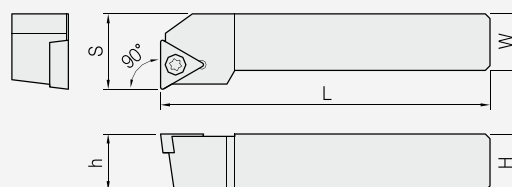
+ TC □ □



| Insert | Item No. | Dimensions (mm) | | | | | Screw | Shim | Shim Screw | Wrench |
|-----------------|---------------------|-----------------|----|----|------|----|----------|------|------------|--------|
| | | H | W | L | S | h | | | | |
| TC □ □ 0902 □ □ | EH-STAC R/L 1010-09 | 10 | 10 | 70 | 10.5 | 10 | SCR02206 | - | - | TW06P |
| TC □ □ 1102 □ □ | 1212-11 | 12 | 12 | 80 | 12.5 | 12 | SCR02565 | - | - | TW07P |

STFC^{R/L} Screw On

+ TC □ □

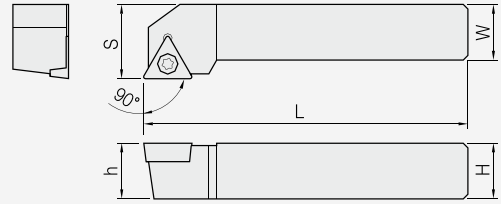


| Insert | Item No. | Dimensions (mm) | | | | | | | Screw | Shim | Shim Screw | Wrench |
|-----------------|--------------------------------|-----------------|----|-----|----|----|----|----------|-------|----------|------------|--------|
| | | H | W | L | S | h | ℓ | | | | | |
| TC □ □ 0902 □ □ | EH-STFC R/L 1010-09 | 10 | 10 | 70 | 12 | 10 | 10 | SCR02206 | - | - | TW06P | |
| TC □ □ 1102 □ □ | EH-STFC R/L 1212-11 | 12 | 12 | 80 | 16 | 12 | 14 | SCR02565 | - | - | W07P | |
| | 1616-11 | 16 | 16 | 100 | 20 | 16 | 14 | | | | | |
| TC □ □ 16T3 □ □ | EH-STFC R/L 1616-16 2020-16 | 16 | 16 | 100 | 20 | 16 | 19 | SCR03512 | SST32 | SSCR0509 | TW15P,W35L | |

STGC^{R/L}

Screw On

+ **TC** □ □

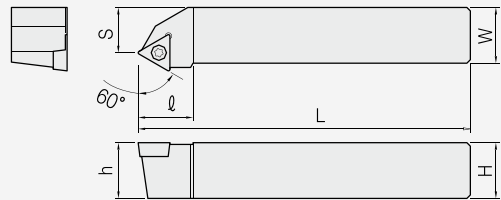


| Insert | Item No. | Dimensions (mm) | | | | | | Screw | Shim | Shim Screw | Wrench |
|------------|---------------------|-----------------|----|-----|----|----|----|----------|-------|------------|------------|
| | | H | W | L | S | h | φ | | | | |
| TC□□0902□□ | EH-STGC R/L 0808-09 | 8 | 8 | 60 | 10 | 8 | 11 | SCR02206 | - | - | TW06P |
| | 1010-09 | 10 | 10 | 70 | 12 | 10 | 11 | | | | |
| TC□□1102□□ | EH-STGC R/L 1212-11 | 12 | 12 | 80 | 16 | 12 | 14 | SCR02565 | - | - | TW07P |
| | 1616-11 | 16 | 16 | 100 | 20 | 16 | 16 | | | | |
| TC□□16T3□□ | EH-STGC R/L 2020-16 | 20 | 20 | 125 | 25 | 20 | 21 | SCR03512 | SST32 | SSCR0509 | TW15P,W35L |
| | 2525-16 | 25 | 25 | 150 | 32 | 25 | 21 | | | | |

STTC^{R/L}

Screw On

+ **TC** □ □

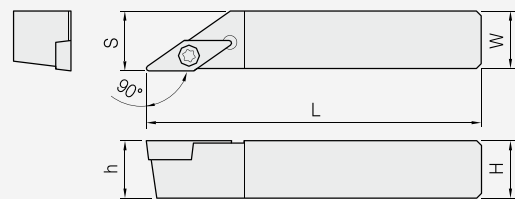


| Insert | Item No. | Dimensions (mm) | | | | | | Screw | Shim | Shim Screw | Wrench |
|------------|---------------------|-----------------|----|-----|----|----|----|----------|-------|------------|------------|
| | | H | W | L | S | h | φ | | | | |
| TC□□1102□□ | EH-STTC R/L 1010-09 | 16 | 16 | 100 | 13 | 16 | 14 | SCR02565 | - | - | TW07P |
| TC□□16T3□□ | EH-STTC R/L 1212-11 | 16 | 16 | 100 | 13 | 16 | 19 | SCR03512 | SST32 | SSCR0509 | TW15P,W35L |
| | 1616-11 | 20 | 20 | 125 | 17 | 20 | 19 | | | | |

SVAB^{R/L}

Screw On

+ **VB** □ □

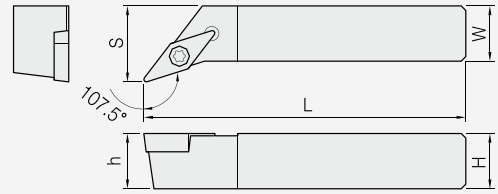


| Insert | Item No. | Dimensions (mm) | | | | | | Screw | Shim | Shim Screw | Wrench |
|------------|---------------------|-----------------|----|-----|------|----|---|----------|-------|------------|------------|
| | | H | W | L | S | h | φ | | | | |
| VB□□1604□□ | EH-SVAB R/L 1616-16 | 16 | 16 | 100 | 16.5 | 16 | | SCR03512 | SSV32 | SSCR0509 | TW15P,W35L |
| | 2020-16 | 20 | 20 | 125 | 20.5 | 20 | | | | | |

SVHB^{R/L}

Screw On

+ **VB** □ □

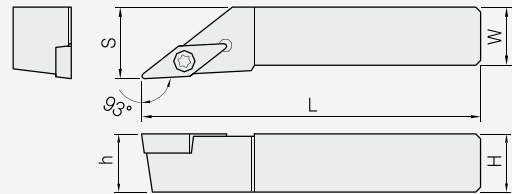


| Insert | Item No. | Dimensions (mm) | | | | | Screw | Shim | Shim Screw | Wrench |
|-----------------|---------------------|-----------------|----|-----|----|----|----------|-------|------------|------------|
| | | H | W | L | S | h | | | | |
| VB □ □ 1604 □ □ | EH-SVHB R/L 2525-16 | 25 | 25 | 150 | 32 | 25 | SCR03512 | SSV32 | SSCR0509 | TW15P,W35L |
| | 3225-16 | 32 | 32 | 170 | 32 | 32 | | | | |

SVJB^{R/L}

Screw On

+ **VB** □ □

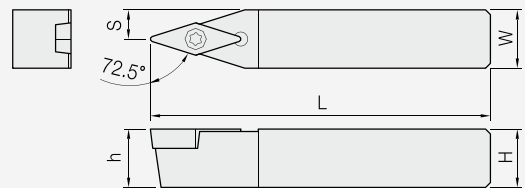


| Insert | Item No. | Dimensions (mm) | | | | | | | Screw | Shim | Shim Screw | Wrench |
|-----------------|---------------------|-----------------|----|-----|----|----|----|----------|-------|----------|---------------|--------|
| | | H | W | L | S | h | ℓ | | | | | |
| VB □ □ 1102 □ □ | EH-SVJB R/L 1212-11 | 12 | 12 | 80 | 16 | 12 | 27 | SCR02565 | - | - | TW07P | |
| | 1616-11 | 16 | 16 | 100 | 20 | 16 | 27 | | | | | |
| | 2020-11 | 20 | 20 | 125 | 25 | 20 | 27 | | | | | |
| VB □ □ 1604 □ □ | EH-SVJB R/L 1616-16 | 16 | 16 | 100 | 20 | 16 | 36 | SCR03512 | SSV32 | SSCR0509 | TW15P W35L | |
| | 2020-16 | 20 | 20 | 125 | 25 | 20 | 41 | | | | | |
| | 2525-16 | 25 | 25 | 150 | 32 | 25 | 41 | | | | | |
| | 3225-16 | 32 | 25 | 170 | 32 | 32 | 55 | | | | | |

SVVBN

Screw On

+ **VB** □ □

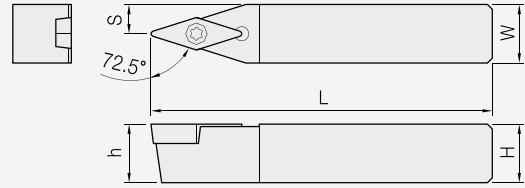


| Insert | Item No. | Dimensions (mm) | | | | | | | Screw | Shim | Shim Screw | Wrench |
|-----------------|-----------------|-----------------|----|-----|------|----|---|----------|-------|----------|---------------|--------|
| | | H | W | L | S | h | ℓ | | | | | |
| VB □ □ 1102 □ □ | EH-SVBN 1212-11 | 12 | 12 | 80 | 6 | 12 | | SCR02565 | - | - | TW07P | |
| | 1616-11 | 16 | 16 | 100 | 8 | 16 | | | | | | |
| | 2020-11 | 20 | 20 | 125 | 10 | 20 | | | | | | |
| VB □ □ 1604 □ □ | EH-SVBN 1616-16 | 16 | 16 | 100 | 8 | 16 | | SCR03512 | SSV32 | SSCR0509 | TW15P W35L | |
| | 2020-16 | 20 | 20 | 125 | 10 | 20 | | | | | | |
| | 2525-16 | 25 | 25 | 150 | 12.5 | 25 | | | | | | |
| | 3225-16 | 32 | 25 | 170 | 12.5 | 32 | | | | | | |

SVVCN

Screw On

+ **VC** □ □



| Insert | Item No. | Dimensions (mm) | | | | | | | Screw | Shim | Shim Screw | Wrench |
|------------|------------------------|-----------------|----|-----|------|----|---|----------|-------|----------|------------|--------|
| | | H | W | L | S | h | | | | | | |
| VC□□1103□□ | EH-SVCN 1212-11 | 12 | 12 | 80 | 6 | 12 | - | SCR02565 | - | - | TW07P | |
| | 1616-11 | 16 | 16 | 100 | 8 | 16 | - | | | | | |
| | 2020-11 | 20 | 20 | 125 | 10 | 20 | - | | | | | |
| VC□□1303□□ | EH-SVCN 1212-13 | 12 | 12 | 80 | 6 | 12 | - | SCR0307 | - | - | TW09P | |
| | 1616-13 | 16 | 16 | 100 | 8 | 16 | - | | | | | |
| | 2020-13 | 20 | 20 | 125 | 10 | 20 | - | | | | | |
| VC□□1604□□ | EH-SVCN 1616-16 | 16 | 16 | 100 | 6 | 16 | - | SCR03512 | SSV32 | SSCR0509 | TW15P,W35L | |
| | 2020-16 | 20 | 20 | 125 | 8 | 20 | - | | | | | |
| | 2525-16 | 25 | 25 | 150 | 12.5 | 25 | - | | | | | |