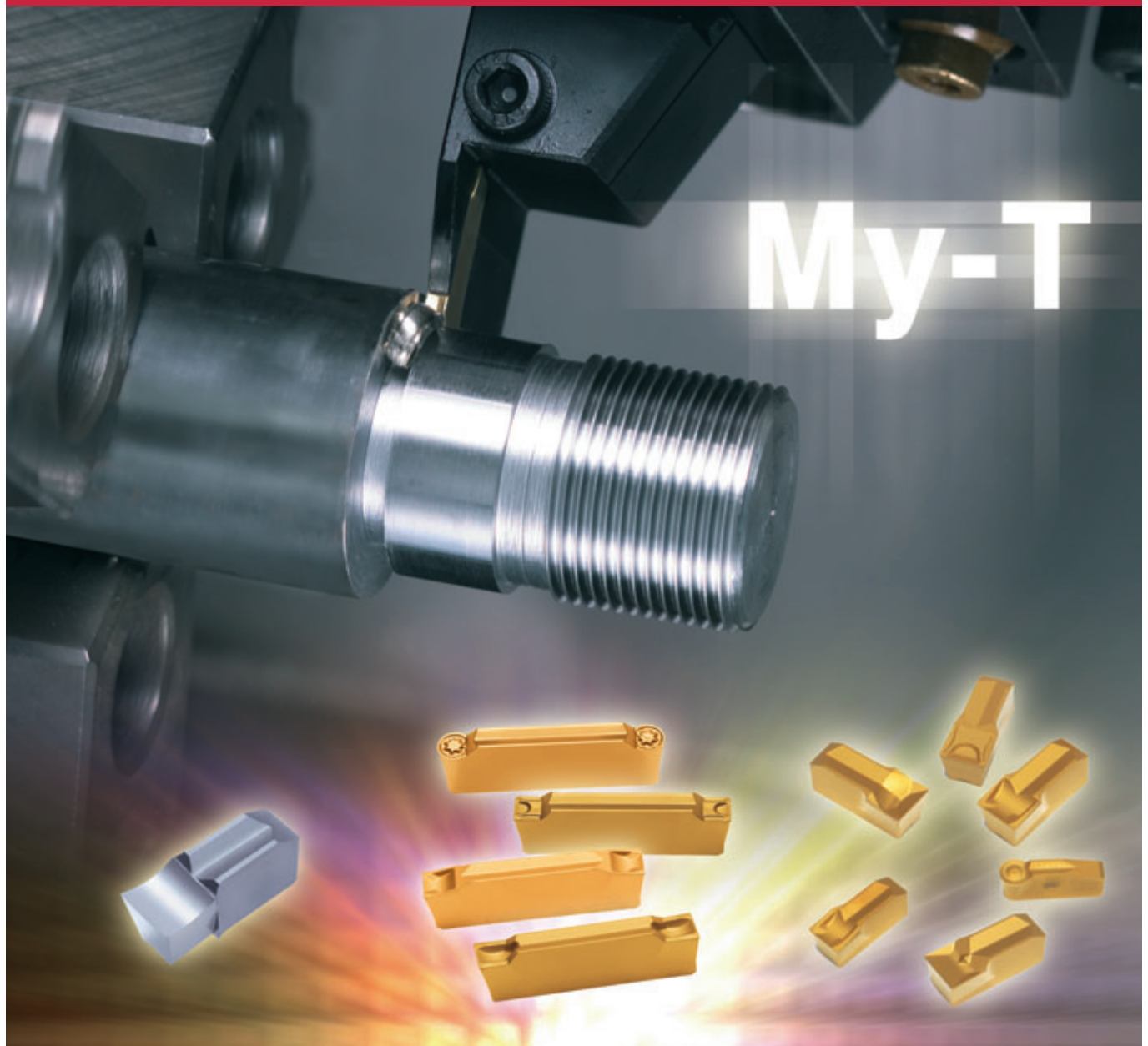


TURNLINE New grooving and parting off tools

MY-T SERIES

Extended version
with new items

Wide variety of tools drastically reduce set up time!



Features

My-T G series

For aluminium

GE-AL Width: 2.0 ~ 4.0 mm

Reduce cutting force and chip welding due to the combination of sharp chipbreaker and fine grain cemented carbide.

For internal grooving

GN Width: 3.0 ~ 5.0 mm

Lower cutting resistance and better cutting action than GE type. Used for internal grooving when problems with chip control and chattering occur.

For face grooving

GF Width: 3.0 ~ 5.0 mm

Larger width of chipbreaker than GE type and with good chip control. Used for face grooving when problems with chip control and chattering occur.

For traversing

WGT•GT Width: 3.0 ~ 5.0 mm

Lower cutting resistance and better cutting action for traversing. Suitable for external, internal grooving and extending face slots etc.

For profiling

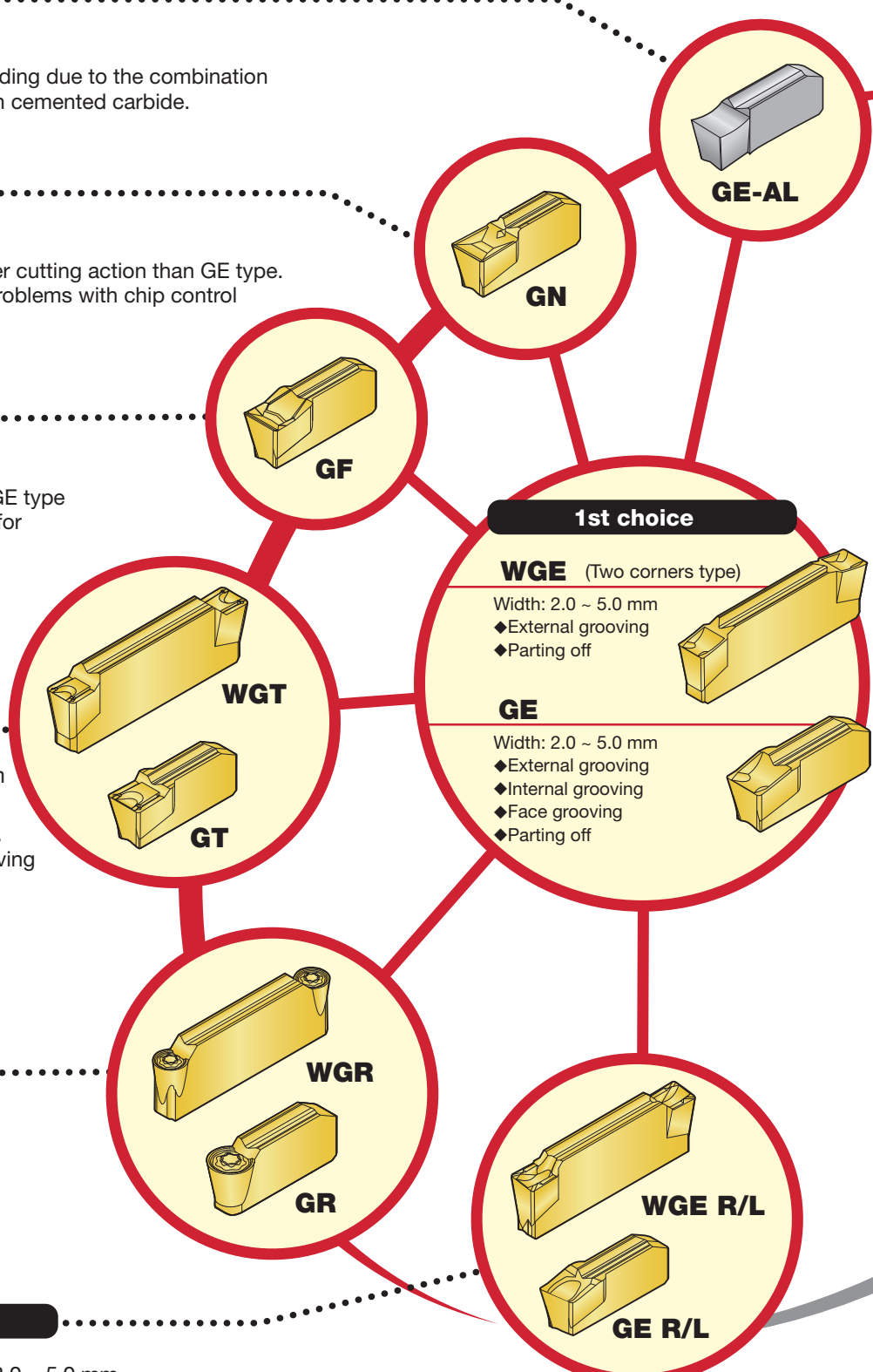
WGT•GR
Width: 3.0 (1.5R) ~ 5.0 (2.5R) mm

Lower cutting resistance and better chip control for profiling.

For parting off

WGE R/L•GE R/L Width: 3.0 ~ 5.0 mm

A chipbreaker with good chip control for parting off. These inserts are effective to minimize burr generation when workpiece is cut off.



My-T G series

■WGE, GE type inserts almighty chipbreaker

- Excellent chip control for external grooving, internal grooving and face grooving.

■Specialist of grooving

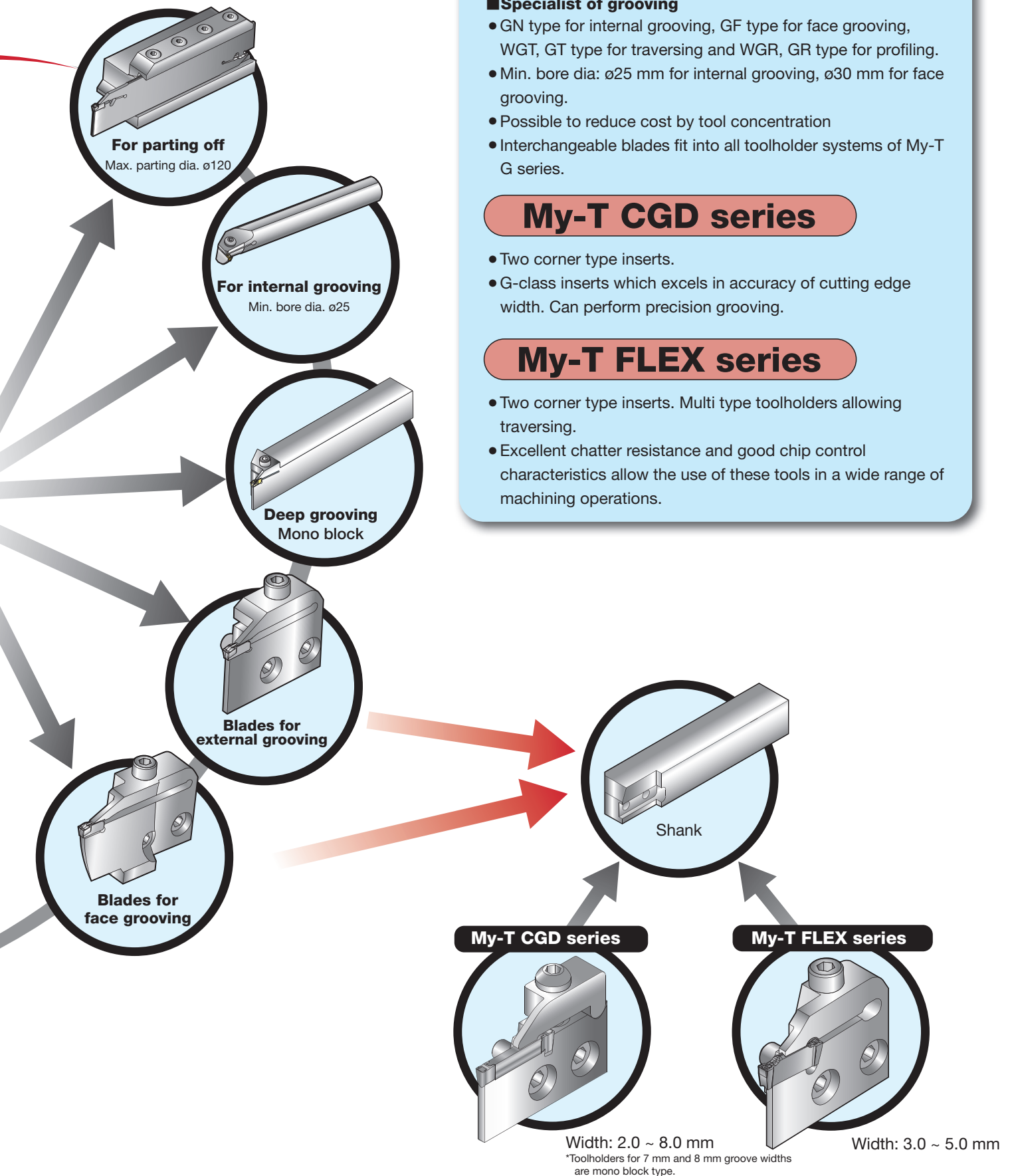
- GN type for internal grooving, GF type for face grooving, WGT, GT type for traversing and WGR, GR type for profiling.
- Min. bore dia: $\varnothing 25$ mm for internal grooving, $\varnothing 30$ mm for face grooving.
- Possible to reduce cost by tool concentration
- Interchangeable blades fit into all toolholder systems of My-T G series.

My-T CGD series

- Two corner type inserts.
- G-class inserts which excels in accuracy of cutting edge width. Can perform precision grooving.

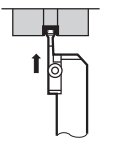
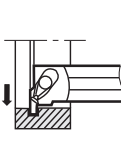
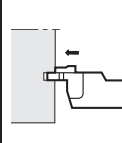
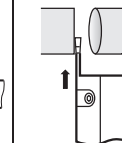
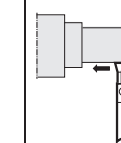
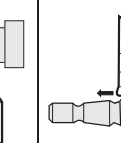
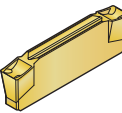
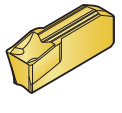
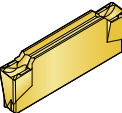
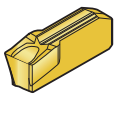
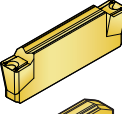
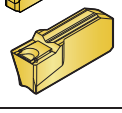
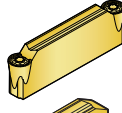
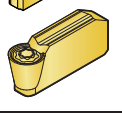
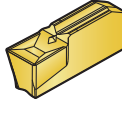
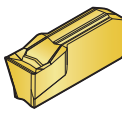
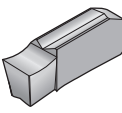
My-T FLEX series

- Two corner type inserts. Multi type toolholders allowing traversing.
- Excellent chatter resistance and good chip control characteristics allow the use of these tools in a wide range of machining operations.

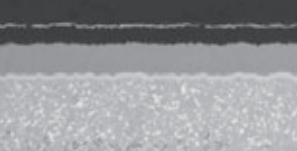

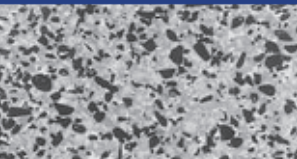



Chipbreaker recommendation for applications

⊙...Basic recommendation ○...Complementary recommendation

| Type | Cat. No. | Shape | Grooving width W (mm) | External | Internal | Face | Parting off | Traversing | Profiling |
|---------------------------------------------|---------------------|-------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| | | | |  |  |  |  |  |  |
| For general | WGE20 GE20 |  | 2 | ⊙ | | | ○ | | |
| | WGE30 GE30 | | 3 | ⊙ | ○ GE type only | ○ GE type only | ○ | | |
| | WGE40 GE40 |  | 4 | ⊙ | ○ GE type only | ○ GE type only | ○ | | |
| | WGE50 GE50 | | 5 | ⊙ | ○ GE type only | ○ GE type only | ○ | | |
| Parting off | WGE20R/L |  | 2 | | | | ⊙ | | |
| | WGE30R/L GE30R/L | | 3 | | | | ⊙ | | |
| | WGE40R/L GE40R/L |  | 4 | | | | ⊙ | | |
| | WGE50R/L GE50R/L | | 5 | | | | ⊙ | | |
| Traversing | WGT30 GT30 |  | 3 | ○ | ○ GT type only | ○ GT type only | ○ | ⊙ | ○ |
| | WGT40 GT40 | | 4 | ○ | ○ GT type only | ○ GT type only | ○ | ⊙ | ○ |
| | WGT50 GT50 |  | 5 | ○ | ○ GT type only | ○ GT type only | ○ | ⊙ | ○ |
| Profiling | WGR30 GR30 |  | 3 | ○ | ○ | ○ | | ○ | ⊙ |
| | WGR40 GR40 | | 4 | ○ | ○ | ○ | | ○ | ⊙ |
| | WGR50 GR50 |  | 5 | ○ | ○ | ○ | | ○ | ⊙ |
| Internal grooving | GN30 |  | 3 | ○ | ⊙ | ○ | ○ | | |
| | GN40 | | 4 | ○ | ⊙ | ○ | ○ | | |
| | GN50 | | 5 | ○ | ⊙ | ○ | ○ | | |
| Face grooving | GF30 |  | 3 | ○ | ○ | ⊙ | ○ | | |
| | GF40 | | 4 | ○ | ○ | ⊙ | ○ | | |
| | GF50 | | 5 | ○ | ○ | ⊙ | ○ | | |
| For Aluminium alloys, Non-ferrous metals | GE20-AL |  | 2 | ⊙ | | | ○ | | |
| | GE30-AL | | 3 | ⊙ | ○ | ○ | ○ | | |
| | GE40-AL | | 4 | ⊙ | ○ | ○ | ○ | | |

Grades

| Grades | Substrate | | | Coating layer | |
|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------------|----------------------------------------------------------------------------------------------|----------------|
| | Specific gravity | Hardness (Hv) | Transverse rupture strength (GPa) | Main composition | Thickness (μm) |
| T9125  | 13.7 | 90.0 | 2.5 | CVD coated grade, Continuously formed columnar crystal TiCN + Al ₂ O ₃ | 14 |
| GH730  | 14.4 | 91.5 | 3.0 | PVD coated grade, Ti (C,N,O) | 3 |
| NS9530  | 15.0 | 93.0 | 2.9 | — | — |
| KS05F  | 15.0 | 93.0 | 2.9 | — | — |
| Features | Coating layer demonstrates the incredible adhesion strength due to the Double-Bridge effect. Exclusive substrate delivers an outstanding balance of wear and chipping resistance. | | | | |
| Features | “Premium – Coat” PVD coated grade combined with tough and fine carbide substrate. Provides high reliability and stable long tool life in small parts machining at the lower cutting speed condition. | | | | |
| Features | Versatile cermet grade with incredible fracture and wear resistance for steel machining. | | | | |
| Features | Fine cemented carbide grade for non-ferrous metal cutting. Demonstrates improved wear and fracture resistance due to the high hardness and strength. | | | | |

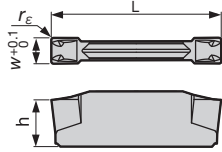
Standard cutting conditions

| Cutting speed: Vc (m/min) | | 0 | 100 | 200 | 300 | 400 | |
|---------------------------|------------------------------------------------------------------------------------------------------|-----|-------|-----|-----|--------|-----|
| P Steel | Low carbon steels, Alloy steels (~ 150HB) S10C, SCM415, SS400, SCr420H / C10E, E275A, 20Cr4H etc. | 80 | T9125 | 200 | 150 | NS9530 | 250 |
| | Medium carbon steels, Alloy steels (150 ~ 250HB) S45C, SCM440 / C45, 42CrMo4 etc. | 80 | T9125 | 180 | 80 | NS9530 | 220 |
| | High carbon steels, Alloy steels (250HB ~) S55C, SNCM439 / C55, C60 etc. | 80 | T9125 | 150 | 80 | NS9530 | 180 |
| M Stainless | Stainless steels SUS304, SUS316 / X5CrNi18-9, X5CrNiMo17-12-3 etc. | 80 | T9125 | 150 | 50 | GH730 | 120 |
| K Cast Iron | Grey cast irons, Ductile cast irons FC250, FCD400 / GG25, GGG40 etc. | 80 | T9125 | 200 | 50 | GH730 | 180 |
| N Non-ferrous | Aluminium alloys, Non-ferrous A2000, AC4C / AlCu4SiMg, AISi7Mg etc. | 200 | KS05F | 300 | | | |

Inserts

2 corner

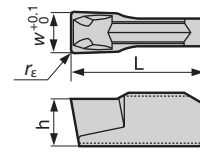
For external grooving and parting off



| Cat. No. | Grades | | | Dimensions (mm) | | | |
|----------|--------|-------|--------|-----------------|----|-----|----------------|
| | Coated | | Cermet | w | L | h | r _E |
| | T9125 | GH730 | | | | | |
| WGE20 | ● | ● | ● | 2 | 20 | 4.7 | 0.2 |
| WGE30 | ● | ● | ● | 3 | | 5.5 | |
| WGE40 | ● | ● | ● | 4 | 25 | 5.7 | |
| WGE50 | ● | ● | ● | 5 | | 5.9 | |

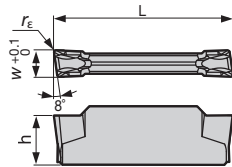
1 corner

For grooving and parting off



| Cat. No. | Grades | | | Dimensions (mm) | | | |
|----------|--------|-------|--------|-----------------|----|-----|----------------|
| | Coated | | Cermet | w | L | h | r _E |
| | T9125 | GH730 | | | | | |
| GE20 | | ● | ● | 2 | 10 | 3.5 | 0.2 |
| GE30 | ● | ● | ● | 3 | | | |
| GE40 | ● | ● | ● | 4 | | 4.0 | |
| GE50 | ● | ● | ● | 5 | 12 | 4.5 | |

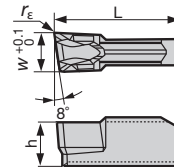
For parting off (handed insert)



Right hand (R) shown.

| Cat. No. | Grades | | Dimensions (mm) | | | |
|----------|--------|---|-----------------|----|-----|----------------|
| | Coated | | w | L | h | r _E |
| | GH730 | | | | | |
| | R | L | | | | |
| WGE20R/L | ● | ● | 2 | 20 | 4.7 | 0.2 |
| WGE30R/L | ● | ● | 3 | | 5.5 | |
| WGE40R/L | ● | ● | 4 | 25 | 5.7 | |
| WGE50R/L | ● | ● | 5 | | 5.9 | |

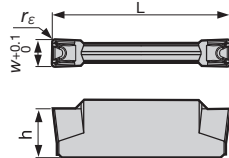
For parting off (handed insert)



Right hand (R) shown.

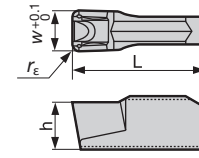
| Cat. No. | Grades | | Dimensions (mm) | | | |
|----------|--------|---|-----------------|----|-----|----------------|
| | Coated | | w | L | h | r _E |
| | GH730 | | | | | |
| | R | L | | | | |
| GE30R/L | ● | ● | 3 | 10 | 3.5 | 0.2 |
| GE40R/L | ● | ● | 4 | | 4.0 | |
| GE50R/L | ● | ● | 5 | 12 | 4.5 | |

For grooving and traversing



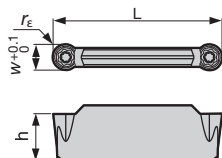
| Cat. No. | Grades | | | Dimensions (mm) | | | |
|----------|--------|-------|--------|-----------------|----|-----|----------------|
| | Coated | | Cermet | w | L | h | r _E |
| | T9125 | GH730 | | | | | |
| WGT30 | ● | ● | ● | 3 | 20 | 5.5 | 0.4 |
| WGT40 | ● | ● | ● | 4 | | 5.7 | |
| WGT50 | ● | ● | ● | 5 | 25 | 5.9 | |

For grooving and traversing



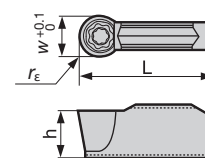
| Cat. No. | Grades | | | Dimensions (mm) | | | |
|----------|--------|-------|--------|-----------------|----|-----|----------------|
| | Coated | | Cermet | w | L | h | r _E |
| | T9125 | GH730 | | | | | |
| GT30 | | ● | ● | 3 | 10 | 3.5 | 0.2 |
| GT40 | | ● | ● | 4 | | 4.0 | |
| GT50 | ● | ● | ● | 5 | 12 | 4.5 | |

For profiling



| Cat. No. | Grades | | | Dimensions (mm) | | | |
|----------|--------|-------|--------|-----------------|----|-----|----------------|
| | Coated | | Cermet | w | L | h | r _E |
| | T9125 | GH730 | | | | | |
| WGR30 | ● | ● | ● | 3 | 20 | 5.5 | 1.5 |
| WGR40 | ● | ● | ● | 4 | | 5.7 | 2.0 |
| WGR50 | | ● | ● | 5 | 25 | 5.9 | 2.5 |

For profiling

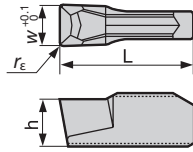


| Cat. No. | Grades | | | Dimensions (mm) | | | |
|----------|--------|-------|--------|-----------------|----|-----|----------------|
| | Coated | | Cermet | w | L | h | r _E |
| | T9125 | GH730 | | | | | |
| GR30 | | ● | ● | 3 | 10 | 3.5 | 1.5 |
| GR40 | ● | ● | ● | 4 | | 4.0 | 2.0 |
| GR50 | ● | ● | ● | 5 | 12 | 4.5 | 2.5 |

● : Stocked items.

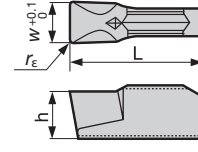
1 corner

For face grooving
(Improved chip control)



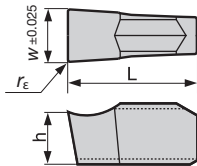
| Cat. No. | Grades | | Dimensions (mm) | | | |
|----------|--------|--------|-----------------|----|-----|----------------|
| | Coated | Cermet | w | L | h | r _E |
| | GH730 | NS9530 | | | | |
| GF30 | ● | ● | 3 | 10 | 3.5 | 0.2 |
| GF40 | ● | ● | 4 | | 4.0 | |
| GF50 | ● | ● | 5 | 12 | 4.5 | |

For internal grooving



| Cat. No. | Grades | | Dimensions (mm) | | | |
|----------|--------|--------|-----------------|----|-----|----------------|
| | Coated | Cermet | w | L | h | r _E |
| | GH730 | NS9530 | | | | |
| GN30 | ● | ● | 3 | 10 | 3.5 | 0.2 |
| GN40 | ● | ● | 4 | | 4.0 | |
| GN50 | ● | ● | 5 | 12 | 4.5 | |

For aluminium
and non-ferrous
metals



| Cat. No. | Grades | Dimensions (mm) | | | |
|----------|----------|-----------------|----|-----|----------------|
| | Uncoated | w | L | h | r _E |
| | KS05F | | | | |
| GE20-AL | ● | 2 | 10 | 3.5 | 0.2 |
| GE30-AL | ● | 3 | | 4.0 | |
| GE40-AL | ● | 4 | | 4.0 | |

Parts

(Mono block type)

| Cat. No. | Clamping screw | Wrench |
|--------------------|----------------|--------|
| | | |
| CGWSR/L□□□□-□□-W | CHHM5-18 | P-4 |
| CGWSR/L□□□□-□□-W-L | | |

(Blade type)

| Cat. No. | Clamping screw | Blade fixing screw | Wrench |
|-----------------------|----------------|--------------------|--------|
| | | | |
| CGWSR/L□□□□-□□WGR/L | CHHM5-18 | CSHB-6 | P-4 |
| CGWSR/L□□□□-□□WGR/L-L | | | |

Standard cutting conditions

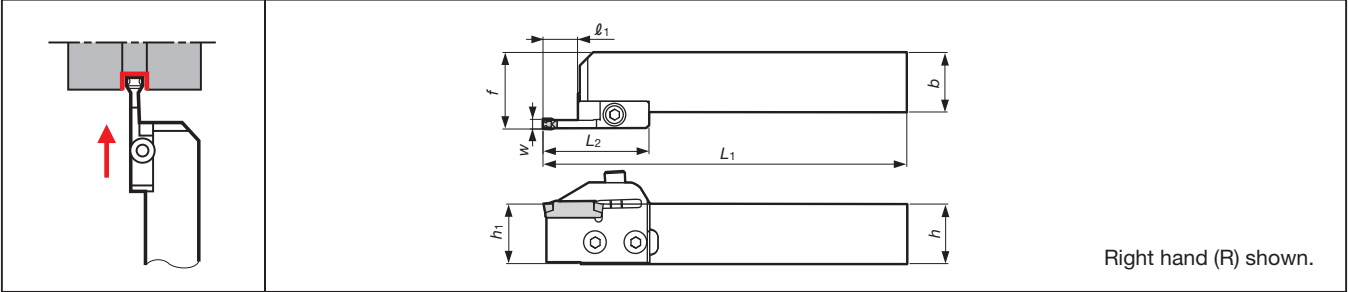
| Work materials | Recommended grade | Cutting speed V _c (m/min) | Operation | Feed: f (mm/rev) | | | |
|-------------------------------------------------------|-------------------|--------------------------------------------|--------------------------------------------|----------------------|-----------------|-----------------|-----------------|
| | | | | Groove width: W (mm) | | | |
| | | | | 2 | 3 | 4 | 5 |
| Low carbon steels Alloy steels (~ 150HB) | T9125 | 80 ~ 200 | Grooving (GE□□) | 0.06 ~ 0.20 | 0.06 ~ 0.25 | 0.07 ~ 0.27 | 0.07 ~ 0.30 |
| | NS9530 | 100 ~ 200 | | | | | |
| | GH730 | 50 ~ 180 | | | | | |
| Medium carbon steels Alloy steels (150 ~ 250HB) | T9125 | 80 ~ 180 | Parting off (GE□□R/L) | 0.04 ~ 0.10 | 0.04 ~ 0.14 | 0.04 ~ 0.14 | 0.04 ~ 0.14 |
| | NS9530 | 80 ~ 180 | | | | | |
| | GH730 | 50 ~ 150 | | | | | |
| High carbon steels Alloy steels (250HB ~) | T9125 | 80 ~ 150 | Traversing (GT□□) | - | ap = 0.5 ~ 1.5 | ap = 0.5 ~ 2.0 | ap = 0.5 ~ 2.5 |
| | NS9530 | 80 ~ 150 | | | f = 0.06 ~ 0.2 | f = 0.06 ~ 0.25 | f = 0.06 ~ 0.27 |
| | GH730 | 50 ~ 120 | | | | | |
| Stainless steels | T9125 | 80 ~ 150 | Profiling (GR□□) | - | ap = 0.5 ~ 1.4 | ap = 0.5 ~ 1.5 | ap = 0.5 ~ 1.6 |
| | GH730 | 50 ~ 120 | | | f = 0.05 ~ 0.25 | f = 0.05 ~ 0.26 | f = 0.05 ~ 0.3 |
| Grey and ductile cast irons | T9125 | 80 ~ 200 | Grooving for Aluminium alloys (GE□□-AL) | 0.03 ~ 0.1 | 0.03 ~ 0.1 | 0.03 ~ 0.1 | - |
| | GH730 | 50 ~ 180 | | | | | |
| Aluminium alloys, Non-ferrous metals | KS05F | 200 ~ 300 | | | | | |

● : Stocked items.

Toolholders

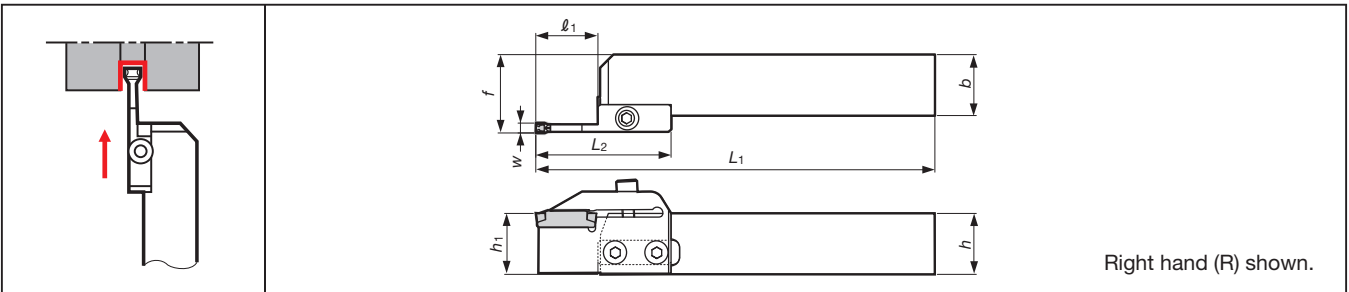
External grooving

CGWS R/L-WG External grooving Blade type



| Groove width W (mm) | Shank and blade set Cat. No. | Stock | | Applicable inserts | Max. groove depth (mm) | Dimensions (mm) | | | | | | Parts | | | | | |
|---------------------|------------------------------|-------|---|-------------------------------------|------------------------|-----------------|----|----|----------------|------|----------------|----------------|-------------|--|-------------|---|---|
| | | R | L | | | h ₁ | b | h | L ₁ | f | l ₁ | L ₂ | Shank | | Blade set | | |
| 3 | CGWSR/L2020-W30GR/L | ● | ● | WGE30 WGE30R/L WGT30 WGR30 | 12 | 20 | 20 | 20 | 150.5 | 26.9 | 13.5 | 43.5 | CGWSR/L2020 | | W30G R/L | ● | ● |
| | CGWSR/L2525-W30GR/L | ● | ● | | | 25 | 25 | 25 | | 31.9 | | | CGWSR/L2525 | | | | |
| 4 | CGWSR/L2020-W40GR/L | ● | ● | WGE40 WGE40R/L WGT40 WGR40 | 13 | 20 | 20 | 20 | 151.5 | 26.9 | 14.5 | 44.5 | CGWSR/L2020 | | W40G R/L | ● | |
| | CGWSR/L2525-W40GR/L | ● | ● | | | 25 | 25 | 25 | | 31.9 | | | CGWSR/L2525 | | | | |
| 5 | CGWSR/L2020-W50GR/L | ● | ● | WGE50 WGE50R/L WGT50 WGR50 | 13 | 20 | 20 | 20 | 151.5 | 26.9 | 14.5 | 44.5 | CGWSR/L2020 | | W50G R/L | ● | |
| | CGWSR/L2525-W50GR/L | ● | ● | | | 25 | 25 | 25 | | 31.9 | | | CGWSR/L2525 | | | | |

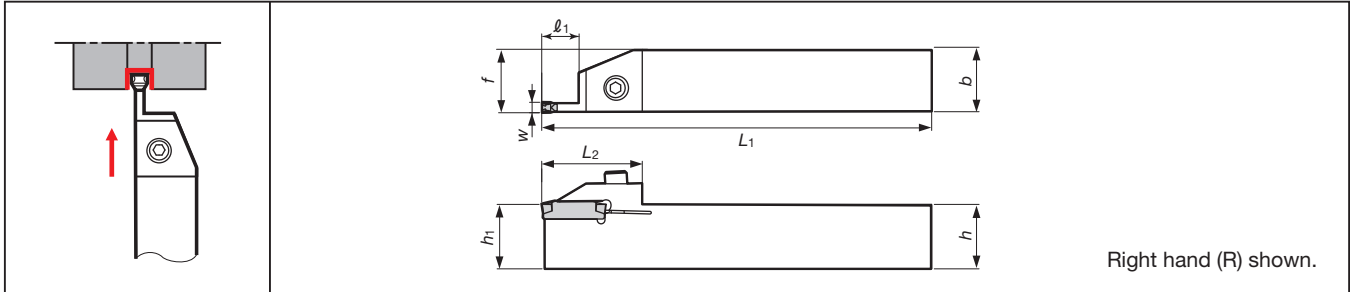
CGWS R/L-WG-L External grooving Blade type



| Groove width W (mm) | Shank and blade set Cat. No. | Stock | | Applicable inserts | Max. groove depth (mm) | Dimensions (mm) | | | | | | Parts | | | | | |
|---------------------|------------------------------|-------|---|-------------------------------------|------------------------------|-----------------|----|----|----------------|------|----------------|----------------|-------------|--|---------------|---|---|
| | | R | L | | | h ₁ | b | h | L ₁ | f | l ₁ | L ₂ | Shank | | Blade set | | |
| 2 | CGWSR/L2020-W20GR/L-L | ● | ● | WGE20 WGE20R/L | 15 | 20 | 20 | 20 | 153.5 | 26.7 | 16.5 | 46.5 | CGWSR/L2020 | | W20G R/L-L | ● | |
| | CGWSR/L2525-W20GR/L-L | ● | ● | | | 25 | 25 | 25 | | 31.7 | | | CGWSR/L2525 | | | | |
| 3 | CGWSR/L2020-W30GR/L-L | ● | ● | WGE30 WGE30R/L WGT30 WGR30 | 16.5 16.5 16.5 17.5 | 20 | 20 | 20 | 157.5 | 26.9 | 20.5 | 50.5 | CGWSR/L2020 | | W30G R/L-L | ● | ● |
| | CGWSR/L2525-W30GR/L-L | ● | ● | | | 25 | 25 | 25 | | 31.9 | | | CGWSR/L2525 | | | | |
| 4 | CGWSR/L2020-W40GR/L-L | ● | ● | WGE40 WGE40R/L WGT40 WGR40 | 21 21 21 21.5 | 20 | 20 | 20 | 162.5 | 26.9 | 25.5 | 55.5 | CGWSR/L2020 | | W40G R/L-L | ● | |
| | CGWSR/L2525-W40GR/L-L | ● | ● | | | 25 | 25 | 25 | | 31.9 | | | CGWSR/L2525 | | | | |
| 5 | CGWSR/L2020-W50GR/L-L | ● | ● | WGE50 WGE50R/L WGT50 WGR50 | 21 | 20 | 20 | 20 | 162.5 | 26.9 | 25.5 | 55.5 | CGWSR/L2020 | | W50G R/L-L | ● | |
| | CGWSR/L2525-W50GR/L-L | ● | ● | | | 25 | 25 | 25 | | 31.9 | | | CGWSR/L2525 | | | | |

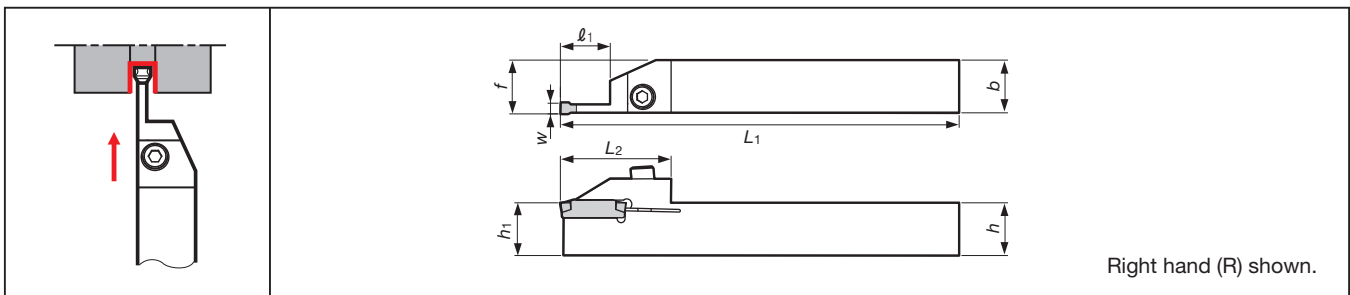
- Notes:
- Max. groove depth may differ by using inserts.
 - When ordering, shank and blade set Cat. No. or shank and blade set are required.
 - When using a right or left hand blade set, the right hand blade set is used with right hand shank and the left hand blade set is used with left hand shank.

● : Stocked items.

CGWS-W
External grooving
Mono block without offset


Right hand (R) shown.

| Groove width W (mm) | Cat. No. | Stock | | Applicable inserts | Max. groove depth (mm) | Dimensions (mm) | | | | | | |
|---------------------|-----------------|-------|---|-------------------------------------|------------------------|-----------------|-----|-----|-------|------|-------|-------|
| | | R | L | | | h_1 | b | h | L_1 | f | l_1 | L_2 |
| 3 | CGWSR/L1616-W30 | ● | | WGE30 WGE30R/L WGT30 WGR30 | 12 | 16 | 16 | 16 | 125 | 16.4 | 13.5 | 34 |
| | CGWSR/L2020-W30 | ● | ● | | | 20 | 20 | 20 | 150 | 20.4 | | |
| | CGWSR/L2525-W30 | ● | | | | 25 | 25 | 25 | 25.4 | | | |
| 4 | CGWSR/L2020-W40 | ● | | WGE40 WGE40R/L WGT40 WGR40 | 13 | 20 | 20 | 20 | 150 | 20.4 | 14.5 | 39 |
| | CGWSR/L2525-W40 | ● | | | | 25 | 25 | 25 | 25.4 | | | |
| 5 | CGWSR/L2020-W50 | ● | ● | WGE50 WGE50R/L WGT50 WGR50 | 13 | 20 | 20 | 20 | 150 | 20.4 | 14.5 | 39 |
| | CGWSR/L2525-W50 | | ● | | | 25 | 25 | 25 | 25.4 | | | |

CGWS R/L-W-L
External deep grooving
Mono block without offset


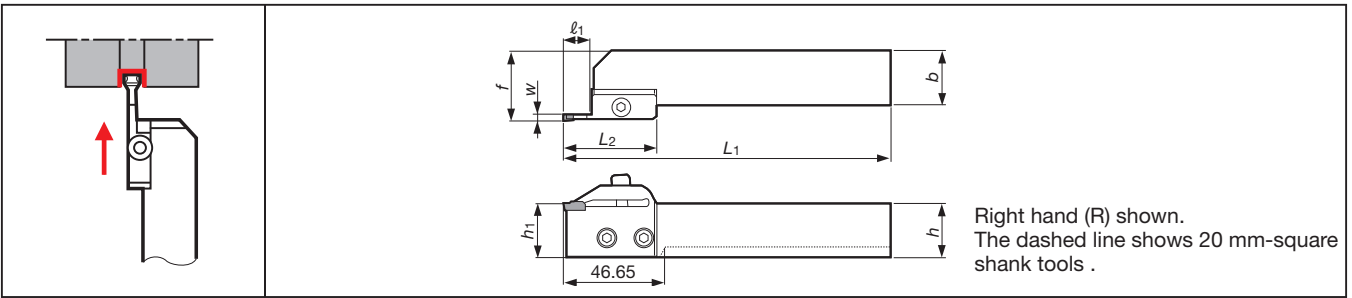
Right hand (R) shown.

| Groove width W (mm) | Cat. No. | Stock | | Applicable inserts | Max. groove depth (mm) | Dimensions (mm) | | | | | | |
|---------------------|-------------------|-------|---|-------------------------------------|------------------------------|-----------------|-----|-----|-------|------|-------|-------|
| | | R | L | | | h_1 | b | h | L_1 | f | l_1 | L_2 |
| 2 | CGWSR/L1616-W20-L | ● | | WGE20 WGE20R/L | 15 | 16 | 16 | 16 | 125 | 16.2 | 16.5 | 37 |
| | CGWSR/L2020-W20-L | ● | ● | | | 20 | 20 | 20 | 150 | 20.2 | | |
| | CGWSR/L2525-W20-L | ● | ● | | | 25 | 25 | 25 | 25.2 | | | |
| 3 | CGWSR/L1616-W30-L | ● | | WGE30 WGE30R/L WGT30 WGR30 | 16.5 16.5 16.5 17.5 | 16 | 16 | 16 | 125 | 16.4 | 20.5 | 37 |
| | CGWSR/L2020-W30-L | ● | ● | | | 20 | 20 | 20 | 150 | 20.4 | | |
| | CGWSR/L2525-W30-L | ● | ● | | | 25 | 25 | 25 | 25.4 | | | |
| 4 | CGWSR/L2020-W40-L | ● | | WGE40 WGE40R/L WGT40 WGR40 | 21 21 21 21.5 | 20 | 20 | 20 | 150 | 20.4 | 25.5 | 42 |
| | CGWSR/L2525-W40-L | ● | | | | 25 | 25 | 25 | 25.4 | | | |
| 5 | CGWSR/L2020-W50-L | ● | ● | WGE50 WGE50R/L WGT50 WGR50 | 21 | 20 | 20 | 20 | 150 | 20.4 | 25.5 | 42 |
| | CGWSR/L2525-W50-L | ● | ● | | | 25 | 25 | 25 | 25.4 | | | |

Note: Max. groove depth may differ by using inserts.

● : Stocked items.

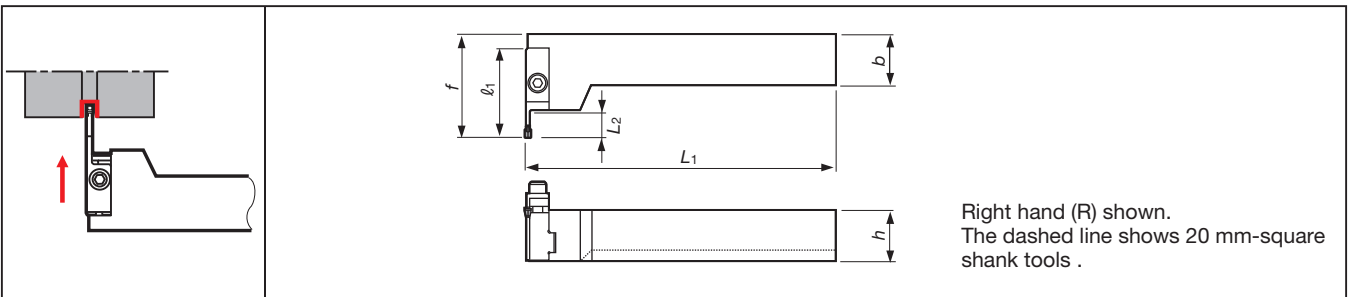
CGWS R/L-G External grooving Toolholders (S: Vertical type)



| Groove width W (mm) | Shank and blade set Cat. No. | Stock | | Applicable inserts | Max. groove depth (mm) | Dimensions (mm) | | | | | | Parts | | | | | |
|---------------------|------------------------------|-------|---|--------------------------------------------|------------------------|-----------------|----|----|----------------|------|----------------|----------------|-------------|--|-----------|-------|---|
| | | R | L | | | h ₁ | b | h | L ₁ | f | l ₁ | L ₂ | Shank | | Blade set | Stock | |
| 2 | CGWSR/L2020-20GR/L | ● | ● | GE20 GE20-AL | 12 | 20 | 20 | 20 | 150.2 | 26.8 | 13.15 | 43.15 | CGWSR/L2020 | | 20GR/L | ● | ● |
| | CGWSR/L2525-20GR/L | ● | ● | | | 25 | 25 | 25 | | 31.8 | | | CGWSR/L2525 | | | ● | ● |
| 3 | CGWSR/L2020-30GR/L | ● | ● | GE30 GE30R/L GT30 GR30 GE30-AL | 12 | 20 | 20 | 20 | 150.2 | 27 | 13.15 | 43.15 | CGWSR/L2020 | | 30GR/L | ● | ● |
| | CGWSR/L2525-30GR/L | ● | ● | | | 25 | 25 | 25 | | 32 | | | CGWSR/L2525 | | | ● | ● |
| 4 | CGWSR/L2020-40GR/L | ● | ● | GE40 GE40R/L GT40 GR40 GE40-AL | 12 | 20 | 20 | 20 | 150.2 | 27.1 | 13.15 | 43.15 | CGWSR/L2020 | | 40GR/L | ● | ● |
| | CGWSR/L2525-40GR/L | ● | ● | | | 25 | 25 | 25 | | 32.1 | | | CGWSR/L2525 | | | ● | ● |
| 5 | CGWSR/L2020-50GR/L | ● | ● | GE50 GE50R/L GT50 GR50 | 12 | 20 | 20 | 20 | 150.2 | 27.2 | 13.15 | 43.15 | CGWSR/L2020 | | 50GR/L | ● | ● |
| | CGWSR/L2525-50GR/L | ● | ● | | | 25 | 25 | 25 | | 32.2 | | | CGWSR/L2525 | | | ● | ● |

Notes: ● When ordering, shank and blade set Cat. No. or shank and blade set are required.
 ● When using a right or left hand blade set, the right hand blade set is used with right hand shank and the left hand blade set is used with left hand shank.

CGWT R/L-G External grooving Toolholders (T: Horizontal type)



| Groove width W (mm) | Shank and blade set Cat. No. | Stock | | Applicable inserts | Max. groove depth (mm) | Dimensions (mm) | | | | | | Parts | | | | |
|---------------------|------------------------------|-------|---|--------------------------------------------|------------------------|-----------------|----|----------------|------|----------------|----------------|-------------|--|-----------|-------|---|
| | | R | L | | | b | h | L ₁ | f | l ₁ | L ₂ | Shank | | Blade set | Stock | |
| 3 | CGWTR/L2020-30GL/R | | | GE30 GE30R/L GT30 GR30 GE30-AL | 12 | 20 | 20 | 150 | 49.9 | 43.15 | 12.9 | CGWTR/L2020 | | 30GL/R | ● | ● |
| | CGWTR/L2525-30GL/R | | | | | 25 | 25 | | | | | CGWTR/L2525 | | | ● | ● |
| 4 | CGWTR/L2020-40GL/R | | | GE40 GE40R/L GT40 GR40 GE40-AL | 12 | 20 | 20 | 150.1 | 49.9 | 43.15 | 12.9 | CGWTR/L2020 | | 40GL/R | ● | ● |
| | CGWTR/L2525-40GL/R | | | | | 25 | 25 | | | | | CGWTR/L2525 | | | ● | ● |
| 5 | CGWTR/L2020-50GL/R | | | GE50 GE50R/L GT50 GR50 | 12 | 20 | 20 | 150.2 | 49.9 | 43.15 | 12.9 | CGWTR/L2020 | | 50GL/R | ● | ● |
| | CGWTR/L2525-50GL/R | | | | | 25 | 25 | | | | | CGWTR/L2525 | | | ● | ● |

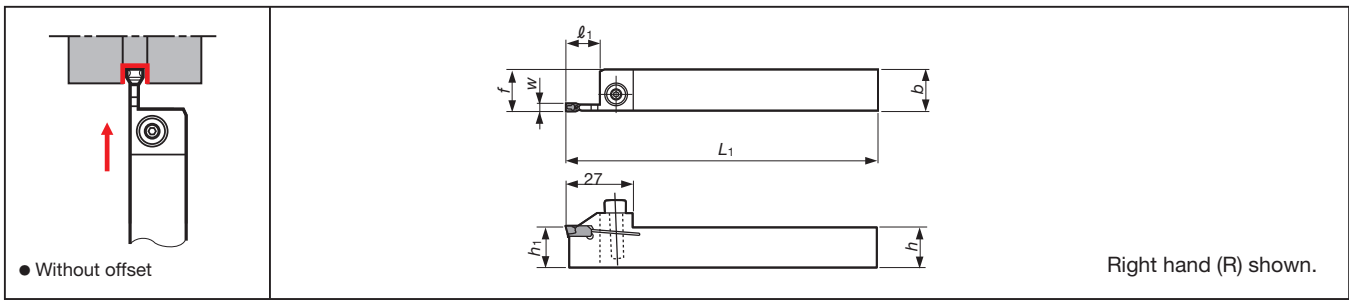
Notes: ● When ordering, shank and blade set Cat. No. or shank and blade set are required.
 ● When using a right or left hand blade set, the right hand blade set is used with left hand shank and the left hand blade set is used with right hand shank.

● : Stocked items.

CGSS R/L

External grooving

Toolholders (Mono block type)

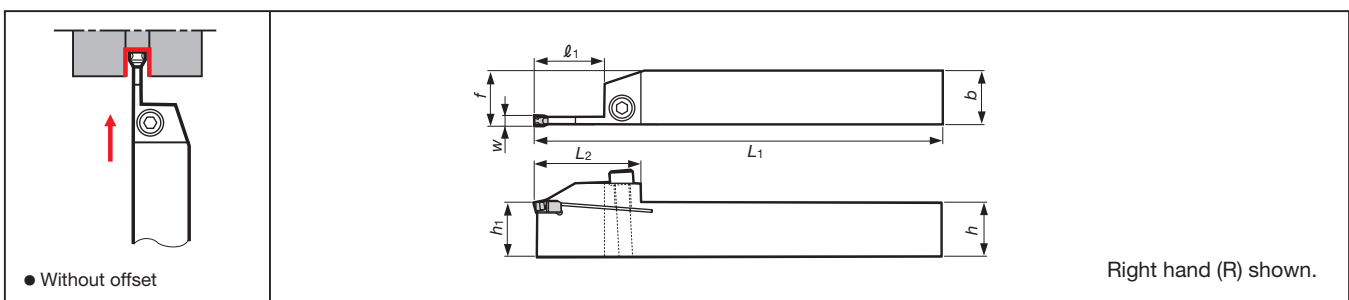


| Groove width W (mm) | Cat. No. | Stock | | Applicable inserts | Max. groove depth (mm) | Dimensions (mm) | | | | | |
|---------------------|----------------|-------|---|--------------------------------------------|------------------------|-----------------|-----|-----|-------|------|-------|
| | | R | L | | | h_1 | b | h | L_1 | f | l_1 |
| 2 | CGSSR/L1616-20 | ● | ● | GE20 GE20-AL | 16 | 16 | 16 | 16 | 125 | 16.2 | 17 |
| | CGSSR/L2020-20 | ● | ● | | | 20 | 20 | 20 | | | |
| | CGSSR/L2525-20 | ● | ● | | | 25 | 25 | 25 | 25.2 | | |
| 3 | CGSSR/L1616-30 | ● | ● | GE30 GE30R/L GT30 GR30 GE30-AL | 12 | 16 | 16 | 16 | 125 | 16.5 | 13.5 |
| | CGSSR/L2020-30 | ● | ● | | | 20 | 20 | 20 | | | |
| | CGSSR/L2525-30 | ● | ● | | | 25 | 25 | 25 | 25.5 | | |
| 4 | CGSSR/L1616-40 | | | GE40 GE40R/L GT40 GR40 GE40-AL | 12 | 16 | 16 | 16 | 125 | 16.6 | 13.5 |
| | CGSSR/L2020-40 | ● | ● | | | 20 | 20 | 20 | | | |
| | CGSSR/L2525-40 | ● | ● | | | 25 | 25 | 25 | 25.6 | | |
| 5 | CGSSR/L1616-50 | | | GE50 GE50R/L GT50 GR50 | 12 | 16 | 16 | 16 | 125 | 16.7 | 13.5 |
| | CGSSR/L2020-50 | ● | ● | | | 20 | 20 | 20 | | | |
| | CGSSR/L2525-50 | ● | ● | | | 25 | 25 | 25 | 25.7 | | |

CGSS R/L-D

External deep grooving

Toolholders (Mono block type)



| Groove width W (mm) | Cat. No. | Stock | | Applicable inserts | Max. groove depth (mm) | Dimensions (mm) | | | | | | |
|---------------------|-----------------|-------|---|----------------------------|------------------------|-----------------|-----|-----|-------|------|-------|-------|
| | | R | L | | | h_1 | b | h | L_1 | f | l_1 | L_2 |
| 3 | CGSSR/L1616-30D | ● | ● | GE30 GE30R/L GE30-AL | 22 | 16 | 16 | 16 | 125 | 16.5 | 23 | 36.2 |
| | CGSSR/L2020-30D | ● | ● | | | 20 | 20 | 20 | | | | |
| | CGSSR/L2525-30D | ● | ● | | | 25 | 25 | 25 | 25.5 | | | |
| 4 | CGSSR/L1616-40D | | | GE40 GE40R/L GE40-AL | 25 | 16 | 16 | 16 | 125 | 16.6 | 26 | 39.5 |
| | CGSSR/L2020-40D | ● | ● | | | 20 | 20 | 20 | | | | |
| | CGSSR/L2525-40D | ● | ● | | | 25 | 25 | 25 | 25.6 | | | |
| 5 | CGSSR/L1616-50D | | | GE50 GE50R/L | 25 | 16 | 16 | 16 | 125 | 16.7 | 26 | 39.5 |
| | CGSSR/L2020-50D | ● | ● | | | 20 | 20 | 20 | | | | |
| | CGSSR/L2525-50D | ● | ● | | | 25 | 25 | 25 | 25.7 | | | |

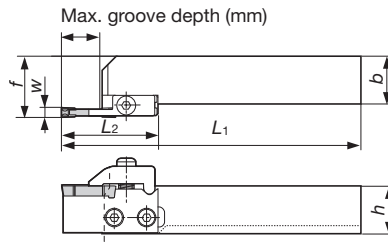
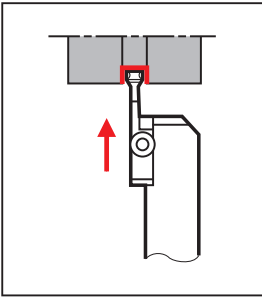
Note: Max. groove depth may differ by using inserts.

● : Stocked items.

CGWS R/L

External grooving

Toolholders (S: Vertical type)



Right hand (R) shown.
The dashed line shows 20 mm square shank tools.

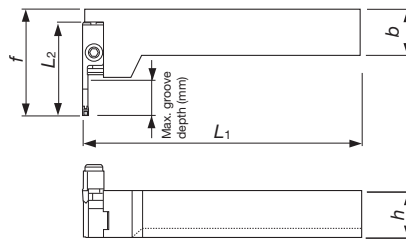
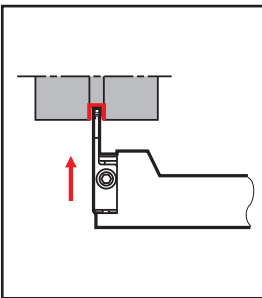
| Groove width W (mm) | Shank and blade set Cat. No. | Stock | | Applicable inserts | Max. groove depth (mm) | Max. parting off dia. (mm) | Dimensions (mm) | | | | | Parts | | | | |
|---------------------|------------------------------|-------|---|--------------------|------------------------|----------------------------|-----------------|----|----------------|-------|----------------|-------------|-----------|-----------|-----------|---|
| | | R | L | | | | b | h | L ₁ | f | L ₂ | Shank | Stock R L | Blade set | Stock R L | |
| 2 | CGWSR/L2020-CGDR/L2 | ● | ● | CGD200 | 16 | 35 | 20 | 20 | 152 | 26.45 | 45 | CGWSR/L2020 | ● | ● | CGDR/L2 | ● |
| | CGWSR/L2525-CGDR/L2 | | ● | | | | 25 | 25 | | 31.45 | | CGWSR/L2525 | ● | ● | | |
| 3 | CGWSR/L2020-CGDR/L3 | | ● | CGD300 | 21.6 | 46 | 20 | 20 | 157.6 | 26.45 | 50.6 | CGWSR/L2020 | ● | ● | CGDR/L3 | ● |
| | CGWSR/L2525-CGDR/L3 | ● | | | | | 25 | 25 | | 31.45 | | CGWSR/L2525 | ● | ● | | |
| 4 | CGWSR/L2020-CGDR/L4 | ● | ● | CGD400 | 21.6 | 46 | 20 | 20 | 157.6 | 26.65 | 50.6 | CGWSR/L2020 | ● | ● | CGDR/L4 | ● |
| | CGWSR/L2525-CGDR/L4 | ● | ● | | | | 25 | 25 | | 31.65 | | CGWSR/L2525 | ● | ● | | |
| 5 | CGWSR/L2020-CGDR/L5 | ● | ● | CGD500 | 21.6 | 46 | 20 | 20 | 157.6 | 26.95 | 50.6 | CGWSR/L2020 | ● | ● | CGDR/L5 | ● |
| | CGWSR/L2525-CGDR/L5 | | ● | | | | 25 | 25 | | 31.95 | | CGWSR/L2525 | ● | ● | | |
| 6 | CGWSR/L2020-CGDR/L6 | ● | ● | CGD600 | 21.6 | 46 | 20 | 20 | 157.6 | 27.1 | 50.6 | CGWSR/L2020 | ● | ● | CGDR/L6 | ● |
| | CGWSR/L2525-CGDR/L6 | ● | ● | | | | 25 | 25 | | 32.1 | | CGWSR/L2525 | ● | ● | | |
| 7-8 | CGWSR/L2525-8 | ● | | CGD700 | 21.6 | 50 | 25 | 25 | 150 | 26.35 | - | - | | | - | |
| | CGWSR/L3232-8 | ● | | | | | CGD800 | 32 | | 32 | | 170 | 33.35 | - | | |

Notes: • When ordering, shank and blade set Cat. No. or shank and blade set are required.
• When using a right or left hand blade set, the right hand blade set is used with right hand shank and the left hand blade set is used with left hand shank.

CGWT R/L

External grooving

Toolholders (T: Horizontal type)



Max. parting off dia. is different than CGWSR/L type.
Right hand (R) shown.
The dashed line shows 20 mm square shank tools.

| Groove width W (mm) | Shank and blade set Cat. No. | Stock | | Applicable inserts | Max. groove depth (mm) | Max. parting off dia. (mm) | Dimensions (mm) | | | | | Parts | | | | |
|---------------------|------------------------------|-------|---|--------------------|------------------------|----------------------------|-----------------|----|----------------|-------|----------------|-------------|-----------|-----------|-----------|---|
| | | R | L | | | | b | h | L ₁ | f | L ₂ | Shank | Stock R L | Blade set | Stock R L | |
| 2 | CGWTR/L2020-CGDL/R2 | | | CGD200 | 13.5 | 27 | 20 | 20 | 149.4 | 51.75 | 45 | CGWTR/L2020 | ● | ● | CGDL/R2 | ● |
| | CGWTR/L2525-CGDL/R2 | | | | | | 25 | 25 | | | | CGWTR/L2525 | ● | ● | | |
| 3 | CGWTR/L2020-CGDL/R3 | | | CGD300 | 19.5 | 39 | 20 | 20 | 149.4 | 57.35 | 50.6 | CGWTR/L2020 | ● | ● | CGDL/R3 | ● |
| | CGWTR/L2525-CGDL/R3 | | | | | | 25 | 25 | | | | CGWTR/L2525 | ● | ● | | |
| 4 | CGWTR/L2020-CGDL/R4 | | | CGD400 | 19.5 | 39 | 20 | 20 | 149.6 | 57.35 | 50.6 | CGWTR/L2020 | ● | ● | CGDL/R4 | ● |
| | CGWTR/L2525-CGDL/R4 | | | | | | 25 | 25 | | | | CGWTR/L2525 | ● | ● | | |
| 5 | CGWTR/L2020-CGDL/R5 | | | CGD500 | 19.5 | 39 | 20 | 20 | 149.9 | 57.35 | 50.6 | CGWTR/L2020 | ● | ● | CGDL/R5 | ● |
| | CGWTR/L2525-CGDL/R5 | | | | | | 25 | 25 | | | | CGWTR/L2525 | ● | ● | | |
| 6 | CGWTR/L2020-CGDL/R6 | | | CGD600 | 19.5 | 39 | 20 | 20 | 150.1 | 57.35 | 50.6 | CGWTR/L2020 | ● | ● | CGDL/R6 | ● |
| | CGWTR/L2525-CGDL/R6 | | | | | | 25 | 25 | | | | CGWTR/L2525 | ● | ● | | |

Notes: • When ordering, shank and blade set Cat. No. or shank and blade set are required.
• When using a right or left hand blade set, the right hand blade set is used with left hand shank and the left hand blade set is used with right hand shank.

● : Stocked items.

Applicable inserts

| | Dimensions (mm) | | | | Cat. No. | Grades | | |
|---|-----------------|------|--------|-----|----------|--------|--------|----------|
| | w ± 0.025 | L | T | rε | | Coated | Cermet | Uncoated |
| | | | | | | GH330 | NS9530 | UX30 |
| 2 | 20 | 3.25 | 0.2 | 0.2 | CGD200 | ● | ★ | ● |
| 3 | 28.6 | 6.3 | | | CGD300 | ● | ★ | ● |
| 4 | | | | | CGD400 | ● | ★ | ● |
| 5 | | | CGD500 | | ● | ★ | ● | |
| 6 | 8.5 | 8.5 | CGD600 | | ● | ★ | ● | |
| 7 | | | CGD700 | | ● | ★ | ● | |
| 8 | | | CGD800 | | ● | ★ | ● | |

Note: Please contact us when ordering special sizes (2.0 - 8.5 mm).

Packing : 5 pcs.

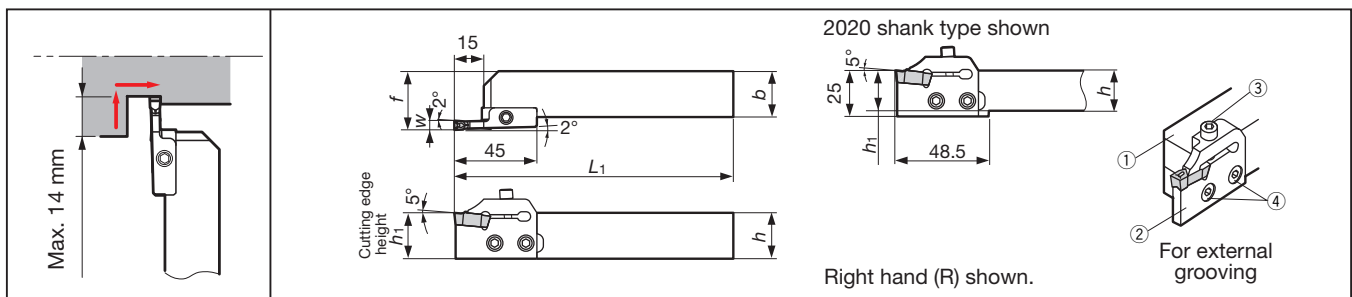
Parts

| | Cat. No. | Parts | | | | | | Applicable insert |
|----------------------|---------------|--------|--------|----------------------|------------|--------|--------|-------------------|
| | | Blade | Clamp | Clamping screw | Spring pin | Spring | Wrench | |
| CGWSR/L□□□□ -CGDR/L□ | CGDR/L2 | TCR/L2 | CCR/L2 | CSHB-6 (2 pieces) | - | BP-9 | P-4 | CGD200 |
| | CGDR/L3 | TCR/L3 | CCR/L3 | | | | | CGD300 |
| CGWSR/L□□□□ -8 | CGDR/L4 | TCR/L4 | CCR/L4 | RT-1 (1 piece) | - | BP-9 | P-4 | CGD400 |
| | CGDR/L5 | TCR/L5 | CCR/L5 | | | | | CGD500 |
| | CGDR/L6 | TCR/L6 | CCR/L6 | | | | | CGD600 |
| | CGWSR/L2525-8 | - | CCR/L8 | CHHM6-20 | 5x14AW | BP-9 | P-5 | CGD700 |
| | CGWSR/L3232-8 | | | | | | | CGD800 |

Standard cutting conditions

| Operation | Cutting speed v _c (m/min) | Groove width: W (mm) | | | | | | |
|----------------------------------|-----------------------------------------|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | Feed: f (mm/rev) | | | | | | |
| | | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Grooving Low carbon steels | 100 ~ 200 | 0.08 ~ 0.20 | 0.08 ~ 0.25 | 0.08 ~ 0.25 | 0.08 ~ 0.25 | 0.08 ~ 0.25 | 0.08 ~ 0.25 | 0.08 ~ 0.25 |
| Grooving Medium carbon steels | | | | 0.08 ~ 0.30 | 0.08 ~ 0.30 | 0.08 ~ 0.30 | 0.08 ~ 0.30 | 0.08 ~ 0.30 |
| Parting off | 100 ~ 150 | 0.08 ~ 0.15 | 0.08 ~ 0.15 | 0.08 ~ 0.15 | 0.08 ~ 0.15 | 0.08 ~ 0.15 | 0.08 ~ 0.15 | 0.08 ~ 0.15 |

CGWS R/L External grooving Toolholders (S: Vertical type)



| Groove width W (mm) | Shank and blade set Cat. No. | Stock | | Applicable inserts | Max. groove depth (mm) | Dimensions (mm) | | | | | Parts | | | | | |
|------------------------|---------------------------------|-------|---|--------------------|------------------------|-----------------|----|----|----------------|----|-------------|---|-----------|----------|-------|---|
| | | R | L | | | h ₁ | b | h | L ₁ | f | Shank | | Blade set | | Stock | |
| 3 | CGWSR/L2020-FLR/L3GP | ● | ● | FLEX30R/L | 10 | 20 | 20 | 20 | 152 | 27 | CGWSR/L2020 | ● | ● | FLR/L3GP | ● | |
| 4 | CGWSR/L2020-FLR/L4GP | | | FLEX40R/L | 12 | | | | | | | | | FLR/L4GP | ● | ● |
| 5 | CGWSR/L2020-FLR/L5GP | | | FLEX50R/L | 14 | | | | | | | | | FLR/L5GP | ● | ● |
| 3 | CGWSR/L2525-FLR/L3GP | ● | ● | FLEX30R/L | 10 | 25 | 25 | 25 | 152 | 32 | CGWSR/L2525 | ● | ● | FLR/L3GP | ● | |
| 4 | CGWSR/L2525-FLR/L4GP | | | FLEX40R/L | 12 | | | | | | | | | FLR/L4GP | ● | ● |
| 5 | CGWSR/L2525-FLR/L5GP | | | FLEX50R/L | 14 | | | | | | | | | FLR/L5GP | ● | ● |

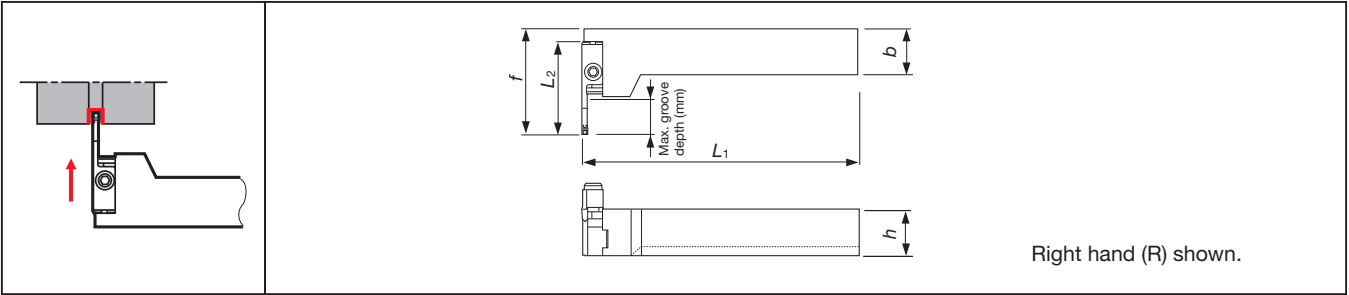
Notes: ● When ordering, shank and blade set Cat. No. or shank and blade set are required.
● When using a right or left hand blade set, the right hand blade set is used with right hand shank and the left hand blade set is used with left hand shank.

● : Stocked items.

CGWT R/L

External grooving

Toolholders (T: Horizontal type)



Right hand (R) shown.

| Groove width W (mm) | Shank and blade set Cat. No. | Stock | | Applicable inserts | Max. groove depth (mm) | Dimensions (mm) | | | | | Parts | | | | | |
|---------------------|------------------------------|-------|---|--------------------|------------------------|-----------------|----|----------------|----|----------------|-------------|---|-----------|----------|-------|--|
| | | R | L | | | b | h | L ₁ | f | L ₂ | Shank | | Blade set | | Stock | |
| 3 | CGWTR/L2020-FLL/R3GP | | | FLEX30L/R | 10 | 20 | 20 | 150 | 52 | 45 | CGWTR/L2020 | ● | ● | FLL/R3GP | ● | |
| 4 | CGWTR/L2020-FLL/R4GP | | | FLEX40L/R | 12 | | | | | | | | | FLL/R4GP | ● | |
| 5 | CGWTR/L2020-FLL/R5GP | | | FLEX50L/R | 14 | | | | | | | | | FLL/R5GP | ● | |
| 3 | CGWTR/L2525-FLL/R3GP | | | FLEX30L/R | 10 | | | | | | CGWTR/L2525 | ● | ● | FLL/R3GP | ● | |
| 4 | CGWTR/L2525-FLL/R4GP | | | FLEX40L/R | 12 | | | | | | | | | FLL/R4GP | ● | |
| 5 | CGWTR/L2525-FLL/R5GP | | | FLEX50L/R | 14 | | | | | | | | | FLL/R5GP | ● | |

- Notes:
- When ordering, shank and blade set Cat. No. or shank and blade-set are required.
 - When using a right or left hand blade set, the right hand blade set is used with left hand shank and the left hand blade set is used with right hand shank.

Applicable inserts

| | Dimensions (mm) | | | Hand | Cat. No. | Grades | | | |
|---|-----------------|----------------|----------------|---------|----------|--------|--------|----------|--|
| | W | r _ε | W ₁ | | | Coated | Cermet | Uncoated | |
| | | | | | | T9125 | NS9530 | UX30 | |
| 3 | 0.4 | 2.15 | R | FLEX30R | | ★ | | | |
| | | | L | FLEX30L | | ★ | | | |
| 4 | 0.4 | 3.1 | R | FLEX40R | | ★ | | | |
| | | | L | FLEX40L | | ★ | | | |
| 5 | 0.4 | 4 | R | FLEX50R | ● | ★ | ● | | |
| | | | L | FLEX50L | ● | ★ | ● | | |

Note: When using a right or left insert, the right hand insert is used with right hand blade set and the left hand insert is used with left hand blade set.

Parts

| | Cat. No. | Clamping screw | Blade fixing screw | Wrench |
|----------------------|----------|----------------|--------------------|--------|
| | | | | |
| CGWSR/L□□□□-FLR/L□GP | CHHM5-18 | CSHB-6 | P-4 | |
| CGWTR/L□□□□-FLL/R□GP | | | | |

● : Stocked items.

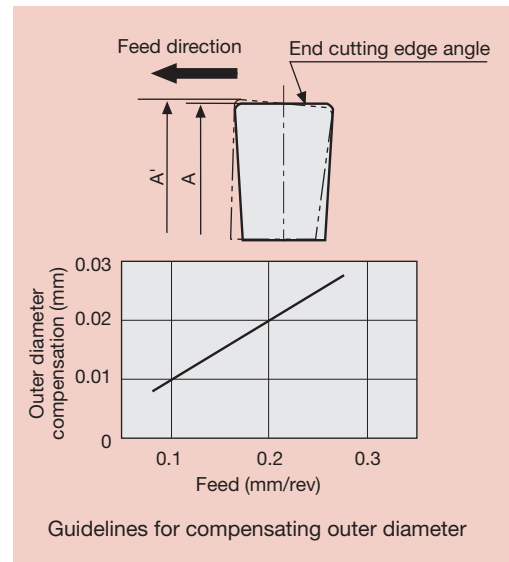
Standard cutting conditions

| Insert grades | | Insert Cat. No. | Grooving | | Lateral feed machining | | | Coolant |
|---------------|----------|-----------------|--------------------------------|----------------------|--------------------------------|----------------------|----------------------------|-----------|
| | | | Cutting speed v_c (m/min) | Feed f (mm/rev) | Cutting speed v_c (m/min) | Feed f (mm/rev) | Depth of cut a_p (mm) | |
| T9125 | Coated | FLEX50R/L | 80 ~ 150 | 0.05 ~ 0.3 | 80 ~ 250 | 0.1 ~ 0.3 | 1.0 ~ 2.5 | Necessary |
| NS9530 | Cermet | FLEX30R/L | 80 ~ 200 | 0.05 ~ 0.2 | 80 ~ 200 | 0.1 ~ 0.2 | 0.8 ~ 1.5 | |
| | | FLEX40R/L | | 0.05 ~ 0.25 | | | 0.8 ~ 2.0 | |
| | | FLEX50R/L | | 0.05 ~ 0.3 | | 0.1 ~ 0.3 | 1.0 ~ 2.5 | |
| UX30 | Uncoated | FLEX50R/L | 60 ~ 150 | 0.05 ~ 0.3 | 60 ~ 150 | 0.1 ~ 0.3 | 1.0 ~ 2.5 | |

- Notes:
- The cutting conditions given above are based on cutting medium carbon steel (S48C, 200HB).
 - When the 20 mm square shank tools are used, machining should be performed at approximately 80% of the values shown above.

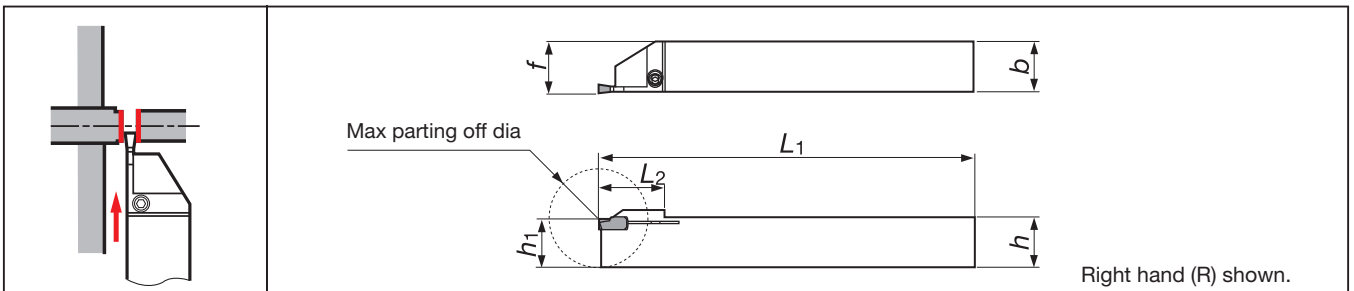
Cautionary Notes

- When performing OD machining, the tool point must be set at a right angle to the axial direction of the work.
- When replacing an insert, the replacement should be made only after completely removing any chips or other foreign matter from the tool clamping area on the holder by using compressed air, etc.
- Never tighten the insert mounting screws when an insert has not been installed since doing so can deform the screws and prevent the future installation of an insert.
- Flex-Tool has a mechanism in which the end cutting edge angle is formed by accepting a cutting force. In external grooving, there is a possibility that if the cutting conditions (feed and depth of cut) are set too high, the programmed diameter will not be achieved. To prevent this problem, it is necessary to perform a compensation in the program by an amount that is equal to the amount A'-A that is shown in the drawing on the right. The values of compensation corresponding to the feeds are also shown in the graph.



Parting off

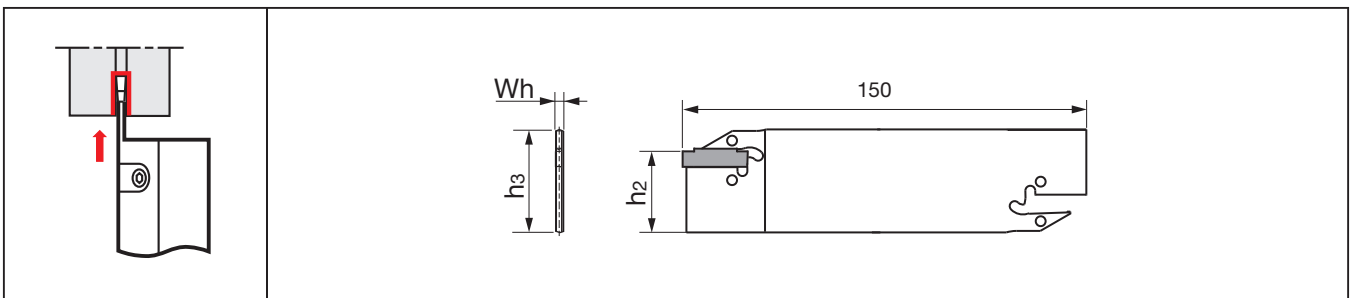
JCGSS R/L Parting off Toolholders for parting off on small lathes



| Groove width W (mm) | Cat. No. | Stock | | Applicable inserts | Max. parting off dia. (mm) | Dimensions (mm) | | | | | |
|---------------------|-----------------|-------|---|--------------------|----------------------------|-----------------|----|----------------|----------------|------|----------------|
| | | R | L | | | b | h | h ₁ | L ₁ | f | L ₂ |
| 2 | JCGSSR/L1010-20 | ● | ● | GE20 GE20-AL | 20 | 10 | 10 | 10 | 125 | 10.2 | 15 |
| | JCGSSR/L1212-20 | ● | ● | | 25 | 12 | 12 | 12 | | 12.2 | 19 |
| | JCGSSR/L1616-20 | ● | ● | | 32 | 16 | 16 | 16 | | 16.2 | 22.5 |

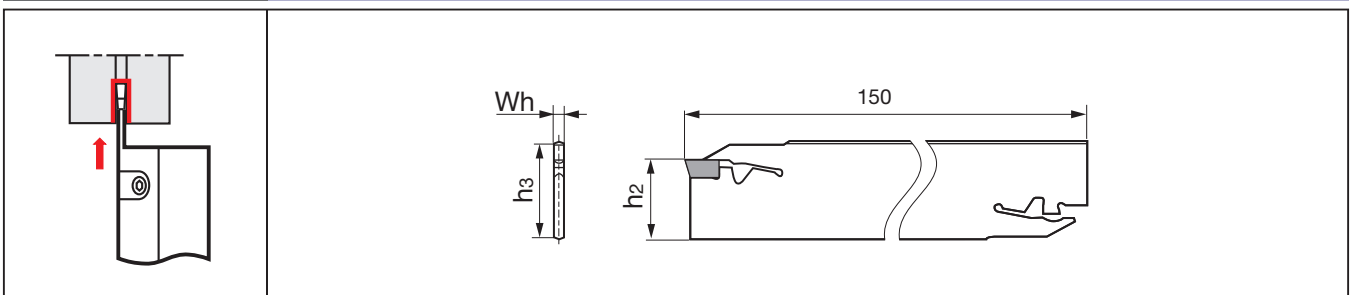
NEW

CCH-W Parting off Blades for parting off (2 corner)



| Groove width W (mm) | Cat. No. | Stock | Applicable inserts | Max. parting off dia. (mm) | Dimensions (mm) | | |
|---------------------|-----------|-------|--------------------|----------------------------|-----------------|----------------|----------------|
| | | | | | Wh | h ₂ | h ₃ |
| 2 | CCH32-W20 | ● | WGE20 WGE20R/L | 33 | 1.6 | 24.6 | (32) |
| 3 | CCH32-W30 | ● | WG*30 WGE30R/L | 33 | 2.2 | 24.6 | (32) |
| 4 | CCH32-W40 | ● | WG*40 WGE40R/L | 42 | 3.2 | 24.5 | (32) |
| 5 | CCH32-W50 | ● | WG*50 WGE50R/L | 42 | 4.2 | 24.3 | (32) |

CCH Parting off Blades for parting off (1 corner)



| Groove width W (mm) | Cat. No. | Stock | Applicable inserts | Max. parting off dia. (mm) | Dimensions (mm) | | |
|---------------------|----------|-------|----------------------------|----------------------------|-----------------|----------------|----------------|
| | | | | | Wh | h ₂ | h ₃ |
| 3 | CCH32-30 | ● | GE30 GE30R/L GE30-AL | 100 | 2.2 | 24.6 | (32) |
| 4 | CCH32-40 | ● | GE40 GE40R/L GE40-AL | 100 | 3.2 | 24.5 | (32) |
| 5 | CCH32-50 | ● | GE50 GE50R/L | 120 | 4.2 | 24.3 | (32) |

● : Stocked items.

Tool blocks

| Cat. No. | Stock | Suitable blade | Overhang ad (mm) | Dimensions (mm) | | | |
|-----------|-------|-----------------------|--------------------------------------------|-----------------|----|----|----------------|
| | | | | h ₁ | ℓ | h | h ₀ |
| CCBS20-32 | ● | CCH32-W□□ CCH32-□□ | Groove width W = 3 ~ 4: 50 W = 5: 60 | 20 | 38 | 20 | 13 |
| CCBS25-32 | ● | | | 25 | | 25 | 8 |
| CCBS32-32 | ● | | | 32 | 32 | 5 | |

Parts

| Cat. No. | Clamping screw | Wrench | Cat. No. | Wedge | Screw | Wrench for screw | Wrench for blade | Wrench |
|----------|-----------------|--------|-----------|-------|-----------|------------------|------------------|--------|
| | JCGSSR/L□□□□-□□ | CSTB-3 | | T-9F | CCH□□-W□□ | - | - | - |
| | | | CCH□□-□□ | - | - | - | CTL-2 | - |
| | | | CCBS□□-□□ | CC-32 | CM6×2 | P-5 | - | - |

* Wrench (CRW33) should be ordered separately.

Standard cutting conditions

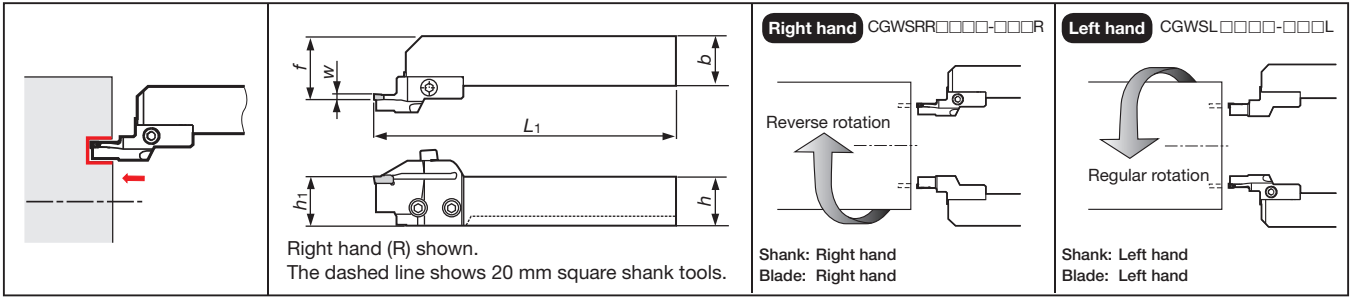
| Work materials | Recommended grade | Cutting speed v _c (m/min) | Operation | Feed: f (mm/rev) | | | |
|-------------------------------------------------------|-------------------|-----------------------------------------|---------------------------------------------------------------|----------------------|-------------|-------------|-------------|
| | | | | Groove width: W (mm) | | | |
| | | | | 2 | 3 | 4 | 5 |
| Low carbon steels Alloy steels (~ 150HB) | T9125 | 80 ~ 200 | Parting off (GE□□R/L) | - | 0.04 ~ 0.14 | 0.04 ~ 0.14 | 0.04 ~ 0.14 |
| | NS9530 | 100 ~ 200 | | | | | |
| Medium carbon steels Alloy steels (150 ~ 250HB) | GH730 | 50 ~ 180 | Grooving, Parting off (GE□□) | 0.05 ~ 0.14 | 0.05 ~ 0.15 | 0.05 ~ 0.16 | 0.05 ~ 0.17 |
| | T9125 | 80 ~ 180 | | | | | |
| | NS9530 | 80 ~ 180 | | | | | |
| High carbon steels Alloy steels (250HB ~) | GH730 | 50 ~ 150 | Grooving, Parting off for Aluminium alloys (GE□□-AL) | 0.03 ~ 0.1 | 0.03 ~ 0.1 | 0.03 ~ 0.1 | |
| | T9125 | 80 ~ 150 | | | | | |
| | NS9530 | 80 ~ 150 | | | | | |
| Stainless steels | GH730 | 50 ~ 120 | | | | | |
| | T9125 | 80 ~ 200 | | | | | |
| Grey and ductile cast irons | GH730 | 50 ~ 180 | | | | | |
| | T9125 | 80 ~ 200 | | | | | |
| Aluminium alloys, Non-ferrous metals | KS05F | 200 ~ 300 | | | | | |

Face grooving

CGWS R/L

Face grooving

Toolholders (S: Vertical type)



| Groove width W (mm) | Min. bore dia. ϕD (mm) | Shank and blade set Cat. No. | Stock | | Applicable inserts | Max. groove depth (mm) | Dimensions (mm) | | | | | Shank | Parts | | | | |
|------------------------|------------------------------------|---------------------------------|-------|--------------|---------------------------------------------|---------------------------|-----------------|----|----|-------|----|-------------|--------------|-----------|--------------|---|---|
| | | | R | L | | | h_1 | b | h | L_1 | f | | Stock R L | Blade set | Stock R L | | |
| 3 | 30 ~ 40 | CGWSR/L2020-30S3040R/L | | | GE30 | 10 | 20 | 20 | 20 | 152.5 | 27 | CGWSR/L2020 | ● | ● | 30S3040R/L | ● | ● |
| | 40 ~ 50 | CGWSR/L2020-30S4050R/L | | | | | | | | | | | | | 30S4050R/L | ● | ● |
| | 50 ~ 65 | CGWSR/L2020-30S5065R/L | | | | | | | | | | | | | 30S5065R/L | ● | ● |
| | 65 ~ 90 | CGWSR/L2020-30S6590R/L | | | | | | | | | | | | | 30S6590R/L | ● | ● |
| | 90 ~ 150 | CGWSR/L2020-30S90150R/L | | | | | | | | | | | | | 30S90150R/L | ● | ● |
| | 150 ~ 500 | CGWSR/L2020-30S150500R/L | | | | | | | | | | | | | 30S150500R/L | ● | ● |
| | 30 ~ 40 | CGWSR/L2525-30S3040R/L | | | GE30- AL | 10 | 25 | 25 | 25 | 152.5 | 32 | CGWSR/L2525 | ● | ● | 30S3040R/L | ● | ● |
| | 40 ~ 50 | CGWSR/L2525-30S4050R/L | | | | | | | | | | | | | 30S4050R/L | ● | ● |
| | 50 ~ 65 | CGWSR/L2525-30S5065R/L | | | | | | | | | | | | | 30S5065R/L | ● | ● |
| | 65 ~ 90 | CGWSR/L2525-30S6590R/L | | | | | | | | | | | | | 30S6590R/L | ● | ● |
| | 90 ~ 150 | CGWSR/L2525-30S90150R/L | | | | | | | | | | | | | 30S90150R/L | ● | ● |
| | 150 ~ 500 | CGWSR/L2525-30S150500R/L | | | | | | | | | | | | | 30S150500R/L | ● | ● |
| | 30 ~ 40 | CGWSR/L2020-30D3040R/L | | | GE30 | 14 | 20 | 20 | 20 | 160.5 | 27 | CGWSR/L2020 | ● | ● | 30D3040R/L | | |
| | 40 ~ 50 | CGWSR/L2020-30D4050R/L | | | | | | | | | | | | | 30D4050R/L | | |
| | 50 ~ 65 | CGWSR/L2020-30D5065R/L | | | | | | | | | | | | | 30D5065R/L | | |
| | 65 ~ 90 | CGWSR/L2020-30D6590R/L | | | | | | | | | | | | | 30D6590R/L | | |
| | 90 ~ 150 | CGWSR/L2020-30D90150R/L | | | | | | | | | | | | | 30D90150R/L | | |
| | 150 ~ 500 | CGWSR/L2020-30D150500R/L | | | | | | | | | | | | | 30D150500R/L | | |
| | 30 ~ 40 | CGWSR/L2525-30D3040R/L | | | GE30- AL | 14 | 25 | 25 | 25 | 160.5 | 32 | CGWSR/L2525 | ● | ● | 30D3040R/L | | |
| | 40 ~ 50 | CGWSR/L2525-30D4050R/L | | | | | | | | | | | | | 30D4050R/L | | |
| 50 ~ 65 | CGWSR/L2525-30D5065R/L | | | 30D5065R/L | | | | | | | | | | | | | |
| 65 ~ 90 | CGWSR/L2525-30D6590R/L | | | 30D6590R/L | | | | | | | | | | | | | |
| 90 ~ 150 | CGWSR/L2525-30D90150R/L | | | 30D90150R/L | | | | | | | | | | | | | |
| 150 ~ 500 | CGWSR/L2525-30D150500R/L | | | 30D150500R/L | | | | | | | | | | | | | |
| 4 | 35 ~ 45 | CGWSR/L2020-40S3545R/L | | | GE40 GF40 GT40 GR40 GE40- AL | 14 | 20 | 20 | 20 | 152.5 | 27 | CGWSR/L2020 | ● | ● | 40S3545R/L | | ● |
| | 45 ~ 55 | CGWSR/L2020-40S4555R/L | | | | | | | | | | | | | 40S4555R/L | | ● |
| | 55 ~ 80 | CGWSR/L2020-40S5580R/L | | | | | | | | | | | | | 40S5580R/L | | ● |
| | 80 ~ 140 | CGWSR/L2020-40S80140R/L | | | | | | | | | | | | | 40S80140R/L | | ● |
| | 140 ~ 500 | CGWSR/L2020-40S140500R/L | | | | | | | | | | | | | 40S140500R/L | | ● |

Notes: ● When ordering, shank and blade set are required.
● When using a right or left hand blade set, the right hand blade set is used with right hand shank and the left hand blade set is used with left hand shank.

● : Stocked items.

| Groove width W (mm) | Min. bore dia. ϕD (mm) | Shank and blade set Cat. No. | Stock | | Applicable inserts | Max. groove depth (mm) | Dimensions (mm) | | | | | Parts | | | | | | | | | | | | | | | |
|------------------------|------------------------------------|---------------------------------|-------|---------|-----------------------|---------------------------|-----------------|----|----|-------|-------|-------------|-------------|---|--------------|--------------|-------|-------|----|-------------|---|---|------------|--------------|--------------|---|---|
| | | | R | L | | | h_1 | b | h | L_1 | f | Shank | Stock | | Blade set | | Stock | | | | | | | | | | |
| | | | | | | | | | | | | | R | L | R | L | R | L | | | | | | | | | |
| 4 | 35 ~ 45 | CGWSR/L2525-40S3545R/L | | | GE40 | 14 | 25 | 25 | 25 | 152.5 | 32 | CGWSR/L2525 | ● | ● | 40S3545R/L | ● | ● | | | | | | | | | | |
| | 45 ~ 55 | CGWSR/L2525-40S4555R/L | | | GF40 | | | | | | | | | | 40S4555R/L | ● | ● | | | | | | | | | | |
| | 55 ~ 80 | CGWSR/L2525-40S5580R/L | | | GT40 | | | | | | | | | | 40S5580R/L | ● | ● | | | | | | | | | | |
| | 80 ~ 140 | CGWSR/L2525-40S80140R/L | | | GR40 | | | | | | | | | | 40S80140R/L | ● | ● | | | | | | | | | | |
| | 140 ~ 500 | CGWSR/L2525-40S140500R/L | | | GE40-AL | | | | | | | | | | 40S140500R/L | ● | ● | | | | | | | | | | |
| | 35 ~ 45 | CGWSR/L2020-40D3545R/L | | | GE40 | 22 | 20 | 20 | 20 | 160.5 | 27 | CGWSR/L2020 | ● | ● | 40D3545R/L | ● | ● | | | | | | | | | | |
| | 45 ~ 55 | CGWSR/L2020-40D4555R/L | | | | | | | | | | | | | GF40 | 40D4555R/L | | | | | | | | | | | |
| | 55 ~ 80 | CGWSR/L2020-40D5580R/L | | | | | | | | | | | | | GT40 | 40D5580R/L | ● | ● | | | | | | | | | |
| | 80 ~ 140 | CGWSR/L2020-40D80140R/L | | | | | | | | | | | | | GR40 | 40D80140R/L | ● | ● | | | | | | | | | |
| | 140 ~ 500 | CGWSR/L2020-40D140500R/L | | | | | | | | | | | | | GE40-AL | 40D140500R/L | ● | ● | | | | | | | | | |
| 35 ~ 45 | CGWSR/L2525-40D3545R/L | | | GE40-AL | 22 | | | | | | | | | | 25 | 25 | 25 | 160.5 | 32 | CGWSR/L2525 | ● | ● | 40D3545R/L | ● | ● | | |
| 45 ~ 55 | CGWSR/L2525-40D4555R/L | | | | | | | | | | | | | | | | | | | | | | GR40 | 40D4555R/L | | | |
| 55 ~ 80 | CGWSR/L2525-40D5580R/L | | | | | | | | | | | | | | | | | | | | | | GT40 | 40D5580R/L | ● | ● | |
| 80 ~ 140 | CGWSR/L2525-40D80140R/L | | | | | | | | | | | | | | | | | | | | | | GR40 | 40D80140R/L | ● | ● | |
| 140 ~ 500 | CGWSR/L2525-40D140500R/L | | | | | | | | | | | | | | | | | | | | | | GE40-AL | 40D140500R/L | ● | ● | |
| 5 | 35 ~ 45 | CGWSR/L2020-50S3545R/L | | | | GE50 | 14 | 20 | 20 | 20 | 152.5 | 27 | CGWSR/L2020 | ● | | | | | | | | | ● | 50S3545R/L | ● | ● | |
| | 45 ~ 55 | CGWSR/L2020-50S4555R/L | | | | | | | | | | | | | | | | | | | | | | GF50 | 50S4555R/L | ● | ● |
| | 55 ~ 75 | CGWSR/L2020-50S5575R/L | | | | | | | | | | | | | | | | | | | | | | GT50 | 50S5575R/L | | |
| | 75 ~ 130 | CGWSR/L2020-50S75130R/L | | | | | | | | | | | | | | | | | | | | | | GR50 | 50S75130R/L | ● | ● |
| | 130 ~ 500 | CGWSR/L2020-50S130500R/L | | | | | | | | | | | | | | | | | | | | | | GE50 | 50S130500R/L | | |
| | 35 ~ 45 | CGWSR/L2525-50S3545R/L | | | GE50 | 22 | | | | | | | | | 25 | 25 | 25 | 152.5 | 32 | CGWSR/L2525 | ● | ● | | 50S3545R/L | ● | ● | |
| | 45 ~ 55 | CGWSR/L2525-50S4555R/L | | | | | | | | | | | | | | | | | | | | | | GF50 | 50S4555R/L | ● | ● |
| | 55 ~ 75 | CGWSR/L2525-50S5575R/L | | | | | | | | | | | | | | | | | | | | | | GT50 | 50S5575R/L | | |
| | 75 ~ 130 | CGWSR/L2525-50S75130R/L | | | | | | | | | | | | | | | | | | | | | | GR50 | 50S75130R/L | ● | ● |
| | 130 ~ 500 | CGWSR/L2525-50S130500R/L | | | | | | | | | | | | | | | | | | | | | | GE50 | 50S130500R/L | | |
| 35 ~ 45 | CGWSR/L2020-50D3545R/L | | | GE50 | 22 | | 20 | 20 | 20 | 160.5 | 27 | CGWSR/L2020 | ● | ● | | | | | | | | | 50D3545R/L | | | | |
| 45 ~ 55 | CGWSR/L2020-50D4555R/L | | | | | | | | | | | | | | | | | | | | | | GF50 | 50D4555R/L | ● | ● | |
| 55 ~ 75 | CGWSR/L2020-50D5575R/L | | | | | | | | | | | | | | | | | | | | | | GT50 | 50D5575R/L | ● | ● | |
| 75 ~ 130 | CGWSR/L2020-50D75130R/L | | | | | | | | | | | | | | | | | | | | | | GR50 | 50D75130R/L | | | |
| 130 ~ 500 | CGWSR/L2020-50D130500R/L | | | | | | | | | | | | | | | | | | | | | | GE50 | 50D130500R/L | ● | ● | |
| 35 ~ 45 | CGWSR/L2525-50D3545R/L | | | GE50 | | 22 | | | | | | | | | 25 | 25 | 25 | 160.5 | 32 | CGWSR/L2525 | ● | ● | 50D3545R/L | | | | |
| 45 ~ 55 | CGWSR/L2525-50D4555R/L | | | | | | | | | | | | | | | | | | | | | | GF50 | 50D4555R/L | ● | ● | |
| 55 ~ 75 | CGWSR/L2525-50D5575R/L | | | | | | | | | | | | | | | | | | | | | | GT50 | 50D5575R/L | ● | ● | |
| 75 ~ 130 | CGWSR/L2525-50D75130R/L | | | | | | | | | | | | | | | | | | | | | | GR50 | 50D75130R/L | | | |
| 130 ~ 500 | CGWSR/L2525-50D130500R/L | | | | | | | | | | | | | | | | | | | | | | GE50 | 50D130500R/L | ● | ● | |

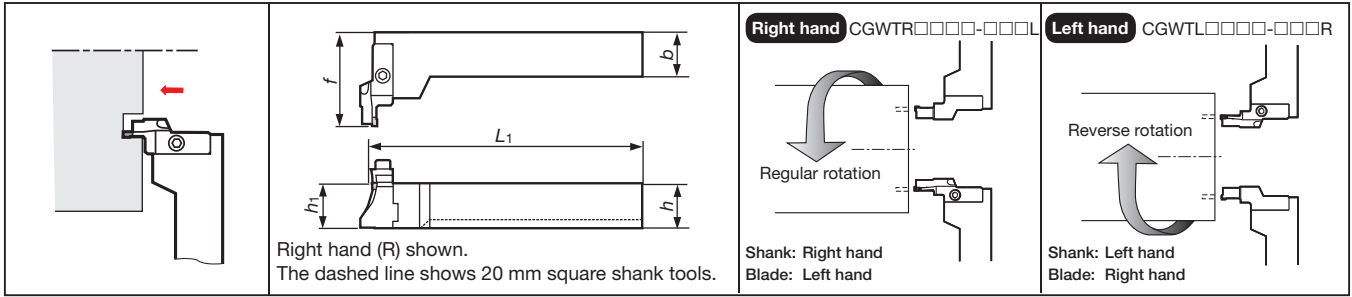
Notes: ● When ordering, shank and blade set are required.
 ● When using a right or left hand blade set, the right hand blade set is used with right hand shank and the left hand blade set is used with left hand shank.

● : Stocked items.

CGWS R/L

Face grooving

Toolholders (T: Horizontal type)



| Groove width W (mm) | Min. bore dia. ϕD (mm) | Shank and blade set Cat. No. | Stock | | Applicable inserts | Max. groove depth (mm) | Dimensions (mm) | | | | | Parts | | | | | | | | | | | | | | | | | | |
|------------------------|------------------------------------|---------------------------------|--------------------------|---|-----------------------|---------------------------|-----------------|-----|-----|-------|-------|-------------|-------------|-----------|------|-------|------------|------------|---|--|--|--|--|--|--|--------------|------------|--------------|---|---|
| | | | R | L | | | h_1 | b | h | L_1 | f | Shank | | Blade set | | Stock | | | | | | | | | | | | | | |
| | | | | | | | | | | | | R | L | R | L | R | L | | | | | | | | | | | | | |
| 3 | 30 ~ 40 | CGWTR/L2020-30S3040L/R | | | GE30 | 10 | 20 | 20 | 20 | 150 | 52.25 | CGWSR/L2020 | ● | ● | | | 30S3040L/R | ● | ● | | | | | | | | | | | |
| | 40 ~ 50 | CGWTR/L2020-30S4050L/R | | | | | | | | | | | | | | | | | | | | | | | | | 30S4050L/R | ● | ● | |
| | 50 ~ 65 | CGWTR/L2020-30S5065L/R | | | | | | | | | | | | | | | | | | | | | | | | | | 30S5065L/R | ● | ● |
| | 65 ~ 90 | CGWTR/L2020-30S6590L/R | | | | | | | | | | | | | | | | | | | | | | | | | | 30S6590L/R | ● | ● |
| | 90 ~ 150 | CGWTR/L2020-30S90150L/R | | | | | | | | | | | | | GF30 | | | | | | | | | | | | | 30S90150L/R | ● | ● |
| | 150 ~ 500 | CGWTR/L2020-30S150500L/R | | | | | | | | | | | | | GT30 | | | | | | | | | | | | | 30S150500L/R | ● | ● |
| | 30 ~ 40 | CGWTR/L2525-30S3040L/R | | | GE30-AL | 10 | 25 | 25 | 25 | 150 | 52.25 | CGWSR/L2525 | ● | ● | | | 30S3040L/R | ● | ● | | | | | | | | | | | |
| | 40 ~ 50 | CGWTR/L2525-30S4050L/R | | | | | | | | | | | | | | | | | | | | | | | | | 30S4050L/R | ● | ● | |
| | 50 ~ 65 | CGWTR/L2525-30S5065L/R | | | | | | | | | | | | | | | | | | | | | | | | | | 30S5065L/R | ● | ● |
| | 65 ~ 90 | CGWTR/L2525-30S6590L/R | | | | | | | | | | | | | | | | | | | | | | | | | | 30S6590L/R | ● | ● |
| | 90 ~ 150 | CGWTR/L2525-30S90150L/R | | | | | | | | | | | | | | | | | | | | | | | | | | 30S90150L/R | ● | ● |
| | 150 ~ 500 | CGWTR/L2525-30S150500L/R | | | | | | | | | | | | | | | | | | | | | | | | | | 30S150500L/R | ● | ● |
| | 3 | 30 ~ 40 | CGWTR/L2020-30D3040L/R | | | GE30 | 14 | 20 | 20 | 20 | 150 | 60.25 | CGWSR/L2020 | ● | ● | | | 30D3040L/R | | | | | | | | | | | | |
| | | 40 ~ 50 | CGWTR/L2020-30D4050L/R | | | | | | | | | | | | | | | | | | | | | | | | | 30D4050L/R | | |
| | | 50 ~ 65 | CGWTR/L2020-30D5065L/R | | | | | | | | | | | | | | | | | | | | | | | | | 30D5065L/R | | |
| | | 65 ~ 90 | CGWTR/L2020-30D6590L/R | | | | | | | | | | | | | GF30 | | | | | | | | | | | | 30D6590L/R | | |
| | | 90 ~ 150 | CGWTR/L2020-30D90150L/R | | | | | | | | | | | | | GT30 | | | | | | | | | | | | 30D90150L/R | | |
| | | 150 ~ 500 | CGWTR/L2020-30D150500L/R | | | | | | | | | | | | | | | | | | | | | | | | | 30D150500L/R | | |
| | | 30 ~ 40 | CGWTR/L2525-30D4050L/R | | | GE30-AL | 14 | 25 | 25 | 25 | 150 | 60.25 | CGWSR/L2525 | ● | ● | | | 30D3040L/R | | | | | | | | | | | | |
| | | 40 ~ 50 | CGWTR/L2525-30D4050L/R | | | | | | | | | | | | | | | | | | | | | | | | | 30D4050L/R | | |
| 50 ~ 65 | | CGWTR/L2525-30D5065L/R | | | | | | | | | | | | | | | | | | | | | | | | | 30D5065L/R | | | |
| 65 ~ 90 | | CGWTR/L2525-30D6590L/R | | | | | | | | | | | | | | | | | | | | | | | | | 30D6590L/R | | | |
| 4 | 35 ~ 45 | CGWTR/L2020-40S3545L/R | | | GE40 | 14 | 20 | 20 | 20 | 150 | 52.25 | CGWSR/L2020 | ● | ● | | | 40S3545L/R | | ● | | | | | | | | | | | |
| | 45 ~ 55 | CGWTR/L2020-40S4555L/R | | | GF40 | | | | | | | | | | | | | | | | | | | | | 40S4555L/R | | ● | | |
| | 55 ~ 80 | CGWTR/L2020-40S5580L/R | | | GT40 | | | | | | | | | | | | | | | | | | | | | 40S5580L/R | | ● | | |
| | 80 ~ 140 | CGWTR/L2020-40S80140L/R | | | GR40 | | | | | | | | | | | | | | | | | | | | | 40S80140L/R | | ● | | |
| | 140 ~ 500 | CGWTR/L2020-40S140500L/R | | | GE40-AL | | | | | | | | | | | | | | | | | | | | | 40S140500L/R | | ● | | |

Notes: ● When ordering, shank and blade set are required.
 ● When using a right or left hand blade set, the right hand blade set is used with left hand shank and the left hand blade set is used with right hand shank.




● : Stocked items.

| Groove width W (mm) | Min. bore dia. ϕD (mm) | Shank and blade set Cat. No. | Stock | | Applicable inserts | Max. groove depth (mm) | Dimensions (mm) | | | | | Parts | | | | | | |
|------------------------|------------------------------------|---------------------------------|-------|---|-----------------------|---------------------------|-----------------|-----|-----|-------|-------|-------------|-------|---|--------------|--------------|-------|---|
| | | | R | L | | | h_1 | b | h | L_1 | f | Shank | Stock | | Blade set | | Stock | |
| | | | | | | | | | | | | | R | L | R | L | R | L |
| 4 | 35 ~ 45 | CGWTR/L2525-40S3545L/R | | | GE40 | 14 | 25 | 25 | 25 | 150 | 52.25 | CGWTR/L2525 | ● | ● | 40S3545L/R | ● | ● | |
| | 45 ~ 55 | CGWTR/L2525-40S4555L/R | | | GF40 | | | | | | | | | | 40S4555L/R | ● | ● | |
| | 55 ~ 80 | CGWTR/L2525-40S5580L/R | | | GT40 | | | | | | | | | | 40S5580L/R | ● | ● | |
| | 80 ~ 140 | CGWTR/L2525-40S80140L/R | | | GR40 | | | | | | | | | | 40S80140L/R | ● | ● | |
| | 140 ~ 500 | CGWTR/L2525-40S140500L/R | | | GE40-AL | | | | | | | | | | 40S140500L/R | ● | ● | |
| | 35 ~ 45 | CGWTR/L2020-40D3545L/R | | | GE40 | 22 | 20 | 20 | 20 | 150 | 60.25 | CGWTR/L2020 | ● | ● | 40D3545L/R | ● | ● | |
| | 45 ~ 55 | CGWTR/L2020-40D4555L/R | | | | | | | | | | | | | GF40 | 40D4555L/R | | |
| | 55 ~ 80 | CGWTR/L2020-40D5580L/R | | | | | | | | | | | | | GT40 | 40D5580L/R | ● | ● |
| | 80 ~ 140 | CGWTR/L2020-40D80140L/R | | | | | | | | | | | | | GR40 | 40D80140L/R | ● | ● |
| | 140 ~ 500 | CGWTR/L2020-40D140500L/R | | | | | | | | | | | | | GE40-AL | 40D140500L/R | ● | ● |
| 5 | 35 ~ 45 | CGWTR/L2525-40D3545L/R | | | GE50 | 14 | 20 | 20 | 20 | 150 | 52.25 | CGWTR/L2020 | ● | ● | 40D3545L/R | ● | ● | |
| | 45 ~ 55 | CGWTR/L2525-40D4555L/R | | | | | | | | | | | | | GF50 | 40D4555L/R | ● | ● |
| | 55 ~ 75 | CGWTR/L2525-40D5575L/R | | | | | | | | | | | | | GT50 | 40D5575L/R | ● | ● |
| | 75 ~ 130 | CGWTR/L2525-40D75130L/R | | | | | | | | | | | | | GR50 | 40D75130L/R | ● | ● |
| | 130 ~ 500 | CGWTR/L2525-40D130500L/R | | | | | | | | | | | | | GE50 | 40D130500L/R | ● | ● |
| | 35 ~ 45 | CGWTR/L2020-50S3545L/R | | | GF50 | 22 | 25 | 25 | 25 | 150 | 60.25 | CGWTR/L2525 | ● | ● | 50S3545L/R | ● | ● | |
| | 45 ~ 55 | CGWTR/L2020-50S4555L/R | | | | | | | | | | | | | GT50 | 50S4555L/R | ● | ● |
| | 55 ~ 75 | CGWTR/L2020-50S5575L/R | | | | | | | | | | | | | GR50 | 50S5575L/R | ● | ● |
| | 75 ~ 130 | CGWTR/L2020-50S75130L/R | | | | | | | | | | | | | GE50 | 50S75130L/R | ● | ● |
| | 130 ~ 500 | CGWTR/L2020-50S130500L/R | | | | | | | | | | | | | GF50 | 50S130500L/R | ● | ● |
| 5 | 35 ~ 45 | CGWTR/L2020-50D3545L/R | | | GT50 | 22 | 20 | 20 | 20 | 150 | 60.25 | CGWTR/L2020 | ● | ● | 50D3545L/R | | | |
| | 45 ~ 55 | CGWTR/L2020-50D4555L/R | | | | | | | | | | | | | GR50 | 50D4555L/R | ● | ● |
| | 55 ~ 75 | CGWTR/L2020-50D5575L/R | | | | | | | | | | | | | GE50 | 50D5575L/R | ● | ● |
| | 75 ~ 130 | CGWTR/L2020-50D75130L/R | | | | | | | | | | | | | GF50 | 50D75130L/R | ● | ● |
| | 130 ~ 500 | CGWTR/L2020-50D130500L/R | | | | | | | | | | | | | GT50 | 50D130500L/R | ● | ● |
| | 35 ~ 45 | CGWTR/L2525-50D3545L/R | | | GR50 | 22 | 25 | 25 | 25 | 150 | 60.25 | CGWTR/L2525 | ● | ● | 50D3545L/R | | | |
| | 45 ~ 55 | CGWTR/L2525-50D4555L/R | | | | | | | | | | | | | GR50 | 50D4555L/R | ● | ● |
| | 55 ~ 75 | CGWTR/L2525-50D5575L/R | | | | | | | | | | | | | GE50 | 50D5575L/R | ● | ● |
| | 75 ~ 130 | CGWTR/L2525-50D75130L/R | | | | | | | | | | | | | GF50 | 50D75130L/R | ● | ● |
| | 130 ~ 500 | CGWTR/L2525-50D130500L/R | | | | | | | | | | | | | GR50 | 50D130500L/R | ● | ● |

Notes: ● When ordering, shank and blade set are required.
● When using a right or left hand blade set, the right hand blade set is used with left hand shank and the left hand blade set is used with right hand shank.

● : Stocked items.

Parts

| Cat. No. | Clamping screw | Blade fixing screw | Wrench |
|------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| |  |  |  |
| CGWTR/L□□□□- □□S/D□□□□L/R | S:CHHM5-18 D:CM5x0.8x16 | CSHB-6 | P-4 |

Example: CGWTR2020-30 **S** 3040L
 ↓
S:CHHM5-18
D:CM5x0.8x16

Standard cutting conditions

| Work materials | Recommended grade | Cutting speed v_c (m/min) | Operation | Feed: f (mm/rev) | | |
|----------------------------------------------------|-------------------|-----------------------------|----------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|
| | | | | Groove width: W (mm) | | |
| | | | | 3 | 4 | 5 |
| Low carbon steels Alloy steels (~150HB) | T9125 | 80 ~ 200 | Face grooving (GE□□) | 0.06 ~ 0.22 | 0.06 ~ 0.24 | 0.07 ~ 0.26 |
| | NS9530 | 100 ~ 200 | | | | |
| Medium carbon steels Alloy steels (150 ~ 250HB) | T9125 | 80 ~ 180 | Face grooving (GF□□) | 0.04 ~ 0.25 | 0.05 ~ 0.26 | 0.05 ~ 0.30 |
| | NS9530 | 80 ~ 180 | | | | |
| High carbon steels Alloy steels 250HB | T9125 | 80 ~ 150 | Face traversing (GT□□) | $ap = 0.5 \sim 1.5$ $f = 0.06 \sim 0.2$ | $ap = 0.5 \sim 2.0$ $f = 0.06 \sim 0.25$ | $ap = 0.5 \sim 2.5$ $f = 0.06 \sim 0.27$ |
| | NS9530 | 80 ~ 150 | | | | |
| Stainless steels | T9125 | 80 ~ 150 | Face traversing (GR□□) | $ap = 0.5 \sim 1.4$ $f = 0.05 \sim 0.25$ | $ap = 0.5 \sim 1.5$ $f = 0.05 \sim 0.26$ | $ap = 0.5 \sim 1.6$ $f = 0.05 \sim 0.3$ |
| | GH730 | 50 ~ 120 | | | | |
| Grey and ductile cast irons | T9125 | 80 ~ 200 | Face grooving for aluminium alloys (GE□□-AL) | 0.03 ~ 0.1 | 0.03 ~ 0.1 | - |
| | GH730 | 50 ~ 180 | | | | |
| Aluminium alloys, Non-ferrous metals | KS05F | 200 ~ 300 | | | | |

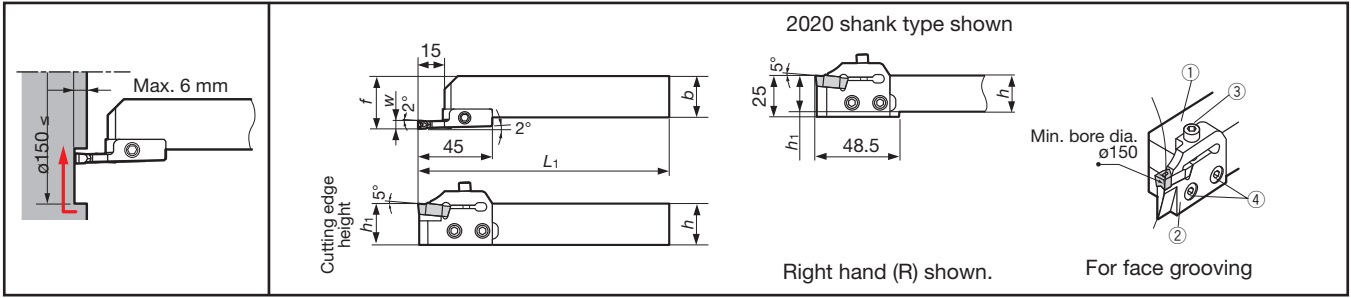
Notes: • For diameter compensation values in traversing, see page 28.
 • For occurrence of vibrations in face traversing, set the feed to the lower side of the values show in the above table.

● : Stocked items.

CGWS R/L

Face grooving

Toolholders (S: Vertical type)



| Groove width w (mm) | Min. bore dia. øD (mm) | Max. groove depth (mm) | Shank and blade set Cat. No. | Stock | | Applicable insert | Dimensions (mm) | | | | | Parts | | | | | |
|---------------------|------------------------|------------------------|------------------------------|-------|---|-------------------|-----------------|----|----------------|----------------|----|--------------------|---|-----------|----------|-------|--|
| | | | | R | L | | b | h | L ₁ | h ₁ | f | Shank ^① | | Blade set | | Stock | |
| 5 | >150 | 6 | CGWSR/L2020-FLR/L5TP | ● | ● | FLEX50R/L | 20 | 20 | 152 | 20 | 27 | CGWSR/L2020 | ● | ● | FLR/L5TP | | |
| | | | CGWSR/L2525-FLR/L5TP | ● | ● | FLEX50R/L | 25 | 25 | | 25 | 32 | CGWSR/L2525 | ● | ● | | ● | |

- Notes:
- When ordering, shank and blade set Cat. No. or shank and blade set are required.
 - When using a right or left hand blade set, the right hand blade set is used with right hand shank and the left hand blade set is used with left hand shank.

Applicable inserts

| | Dimensions (mm) | | | | Cat. No. | Grades | | | |
|-----------------------|-----------------|----------------|----------------|------|----------|--------|--------|----------|-------------------------------------------------------|
| | W | r _ε | W ₁ | Hand | | Coated | Cermet | Uncoated | |
| | | | | | T9125 | NS9530 | UX30 | | |
| Right hand (R) shown. | 5 | 0.4 | 4 | R | FLEX50R | ● | ★ | ● | Left hand inserts are identified with a recessed dot. |
| | | | | L | FLEX50L | ● | ★ | ● | |

- Note: When using a right or left hand blade set, the right hand blade set is used with right hand shank and the left hand blade set is used with left hand shank.

Parts

| Cat. No. | Clamping screw ^③ | Blade fixing screw ^④ | Wrench |
|----------|-----------------------------|---------------------------------|--------|
| | CGWSR/L□□□□-FLR/L□TP | CHHM5-18 | CSHB-6 |

Cautionary notes

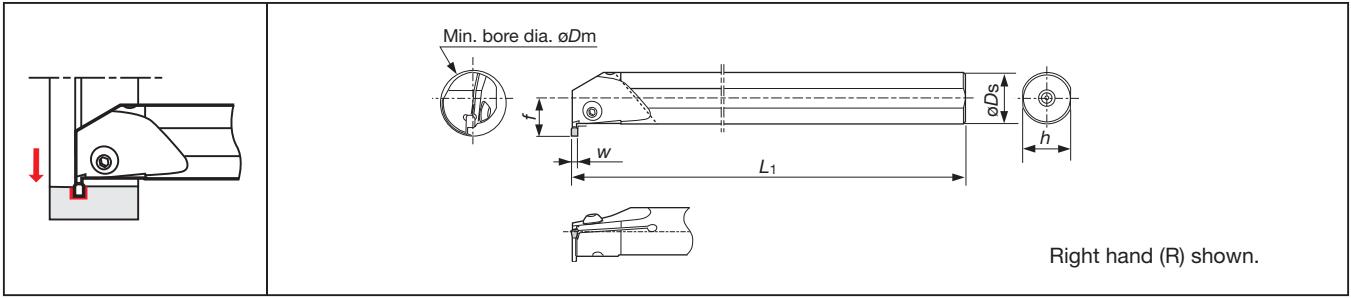
- When facing, the operation should proceed from the OD toward the center in order to prevent tool breakage.
- When facing, depth of cut and feed should be performed at approximately 70% of the values shown above.

Internal grooving

CGT R/L

Internal grooving

Toolholders for parting off on small lathes



| Groove width w (mm) | Min. bore dia. ϕD_m (mm) | Cat. No. | Stock | | Applicable inserts | Max. groove depth (mm) | Dimensions (mm) | | | |
|-----------------------|--------------------------------|---------------|-------|---|--------------------|------------------------|-----------------|------|-------|-----|
| | | | R | L | | | ϕD_s | f | L_1 | h |
| 3 | 25 | S20Q-CGTR/L30 | ● | ● | GE30,GN30,GT30 | 3.5 | 20 | 14.5 | 180 | 18 |
| | 32 | S25R-CGTR/L30 | ● | ● | GR30,GE30-AL | 5 | 25 | 18.5 | 200 | 23 |
| 4 | 32 | S25R-CGTR/L40 | ● | ● | GE40,GN40,GT40 | 5 | | | | |
| | 40 | S32S-CGTR/L40 | ● | ● | GR40,GE40-AL | 6 | 32 | 23 | 250 | 30 |
| 5 | 32 | S25R-CGTR/L50 | ● | ● | GE50,GN50 | 5 | 25 | 18.5 | 200 | 23 |
| | 40 | S32S-CGTR/L50 | ● | ● | GT50,GR50 | 6 | 32 | 23 | 250 | 30 |

Parts

| Cat. No. | Clamping screw | Wrench |
|---------------|----------------|--------|
| | | |
| S□□□-CGTR/L□□ | BHM5-14 | P-3 |

Standard cutting conditions

| Work materials | Recommended grade | Cutting speed v_c (m/min) | Operation | Feed: f (mm/rev) | | |
|----------------------------------------------------|-------------------|-----------------------------|--------------------------------------------------|---------------------------------------------|---------------------------------------------|--------------------------------------------|
| | | | | Groove width: W (mm) | | |
| | | | | 3 | 4 | 5 |
| Low carbon steels Alloy steels (~ 150HB) | T9125 | 80 ~ 200 | Internal Grooving (GE□□) | 0.04 ~ 0.14 | 0.05 ~ 0.15 | 0.05 ~ 0.16 |
| | NS9530 | 100 ~ 200 | | | | |
| | GH730 | 50 ~ 180 | | | | |
| Medium carbon steels Alloy steels (150 ~ 250HB) | T9125 | 80 ~ 180 | Internal Grooving (GN□□) | 0.04 ~ 0.16 $ap = 0.5 \sim 1.5$ | 0.05 ~ 0.18 $ap = 0.5 \sim 2.0$ | 0.05 ~ 0.20 $ap = 0.5 \sim 2.5$ |
| | NS9530 | 80 ~ 180 | | | | |
| | GH730 | 50 ~ 150 | | | | |
| High carbon steels Alloy steels (250HB ~) | T9125 | 80 ~ 150 | Internal Traversing (GT□□) | $ap = 0.5 \sim 1.4$ $f = 0.05 \sim 0.25$ | $ap = 0.5 \sim 1.5$ $f = 0.05 \sim 0.26$ | $ap = 0.5 \sim 1.6$ $f = 0.05 \sim 0.3$ |
| | NS9530 | 80 ~ 150 | | | | |
| | GH730 | 50 ~ 120 | | | | |
| Stainless steels | T9125 | 80 ~ 150 | Internal Traversing (GR□□) | | | |
| | GH730 | 50 ~ 120 | | | | |
| Grey and ductile cast irons | T9125 | 80 ~ 200 | Internal Grooving for Aluminium alloys (GE□□-AL) | 0.03 ~ 0.1 | 0.03 ~ 0.1 | - |
| | GH730 | 50 ~ 180 | | | | |
| Aluminium alloys, Non-ferrous metals | KS05F | 200 ~ 300 | | | | |

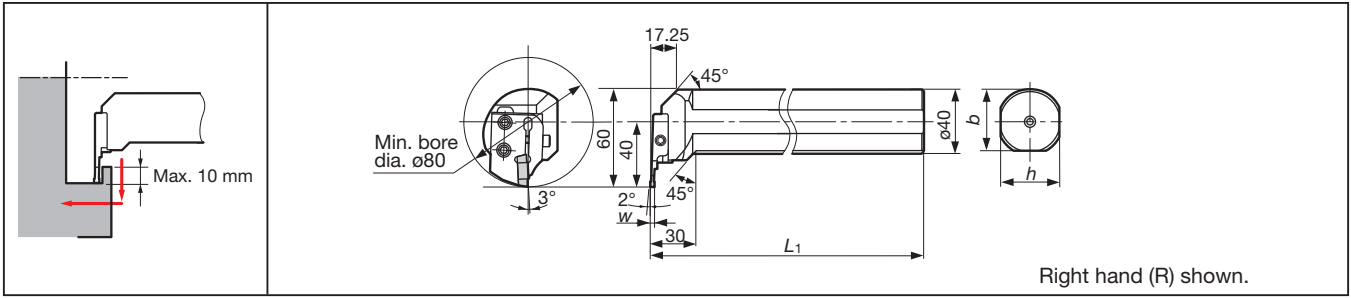
Notes: ● For diameter compensation values in traversing, see page 28.
 ● For occurrence of vibrations in traversing, set the feed to the lower side of the values show in the above table.

● : Stocked items.

CGWT R/L

Internal grooving

Toolholders (T: Horizontal type)



Right hand (R) shown.

| Groove width W (mm) | Min. bore dia. øDm (mm) | Shank and blade set Cat. No. | Stock | | Applicable insert | Max. groove depth (mm) | Dimensions (mm) | | | | | Parts | | | | | | | |
|---------------------|-------------------------|------------------------------|-------|---|-------------------|------------------------|-----------------|------|----|----------------|---|--------------------|--|------------------------|---|----------|--|---|---|
| | | | R | L | | | f | h | b | L ₁ | ℓ | Shank ^① | | Blade set ^② | | Stock | | | |
| 3 | 80 | CGWTR/L0040-FLL/R3NP | ● | ● | FLEX30L/R | 10 | - | 37.5 | 37 | 180 | - | CGWTR/L0040 | | ● | ● | FLL/R3NP | | ● | ● |

Notes: ● Special shank and blade for FLEX type.

- When using a right or left hand blade set, the right hand blade set is used with left hand shank and the left hand blade set is used with right hand shank.

Applicable inserts

| Dimensions (mm) | | | | Cat. No. | Grades | | |
|-----------------|----------------|----------------|------|----------|--------------|---------------|--|
| W | r _E | W ₁ | Hand | | Coated T9125 | Cermet NS9530 | |
| 3 | 0.4 | 2.15 | R | FLEX30R | | ★ | |
| | | | L | FLEX30L | | ★ | |

Right hand (R) shown.

Left hand inserts are identified with a recessed dot.

Note: When using a right or left insert, the right hand insert is used with right hand blade set and the left hand insert is used with left hand blade set.

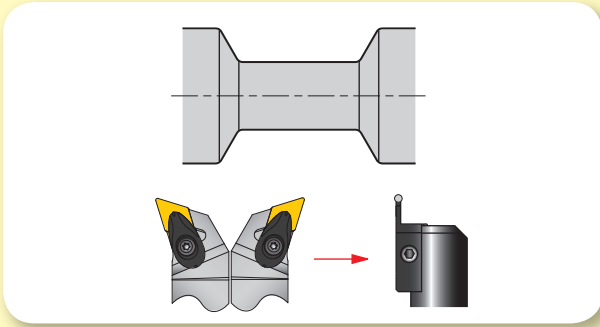
Parts

| Cat. No. | Clamping screw | Blade fixing screw | Wrench |
|----------|----------------------|--------------------|--------|
| | CGWTR/L0040-FLL/R3NP | CHHM5-18 | CSHB-6 |

Recommended tool path

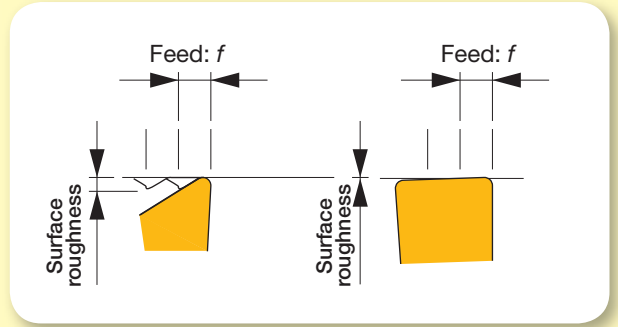
Example of tool integration

WGT/GT type or WGR/GR type inserts can replace the several numbers of handed tools for both side cutting.



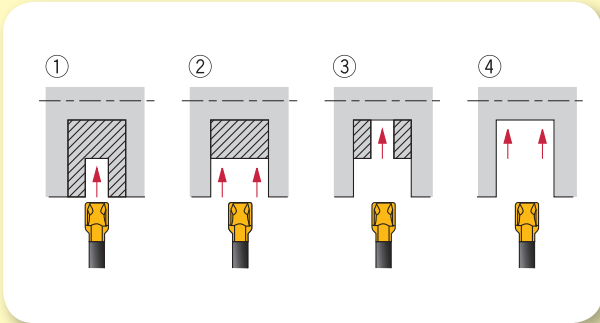
Comparison of surface roughness in My-T and conventional tool

WGR/GT type inserts can work like a wiper edge when traversing, and may improve the surface roughness.



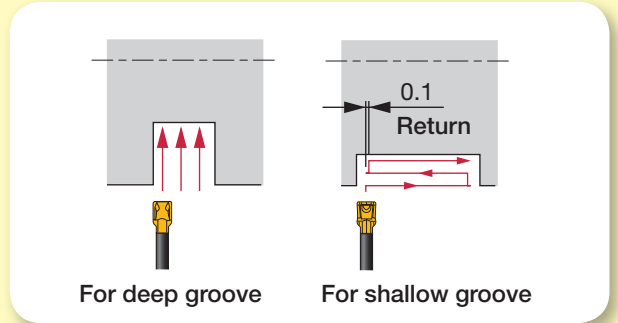
Machining deep groove

When machining a deep groove, the following process is recommended.



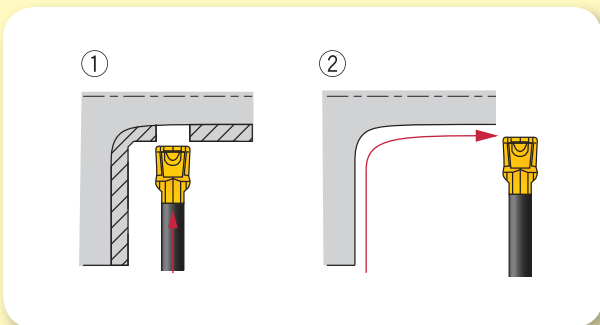
Machining wide groove

When machining a wide groove, the following two types of processes can be selected depending on the groove depth.



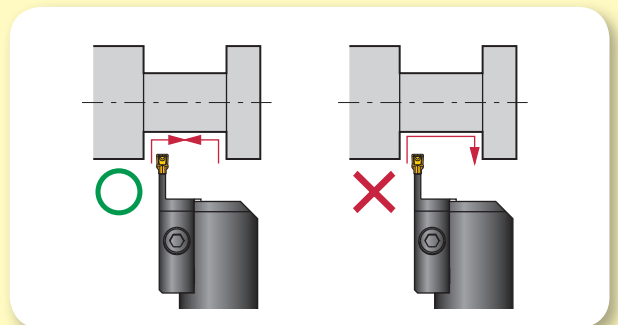
Machining radius shape or chamfering

When making a radius shape or chamfer at the bottom, the following process is recommended.



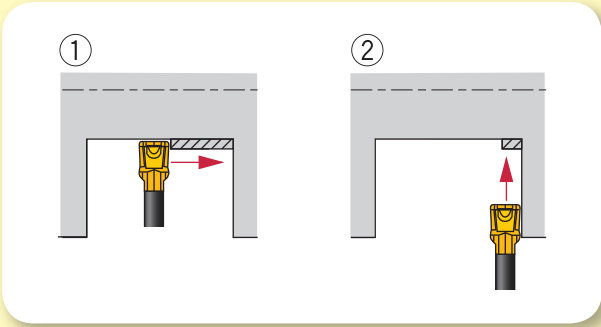
Machining the wall of groove

When finishing the wall with WGT/GT type, pull cutting is not recommended. Plunge cutting for both sides is recommended.



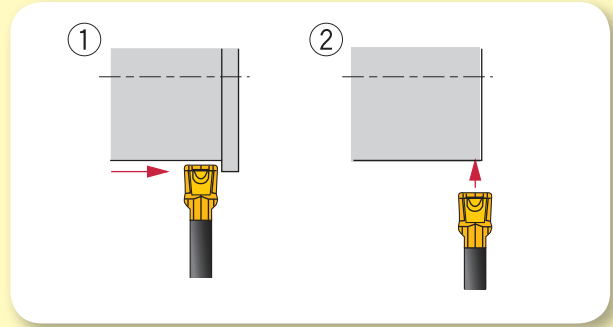
Machining the bottom

When machining the bottom, chip re-cutting may occur at the corner. To prevent this, stop cutting before the end and remove remaining portion by plunging.



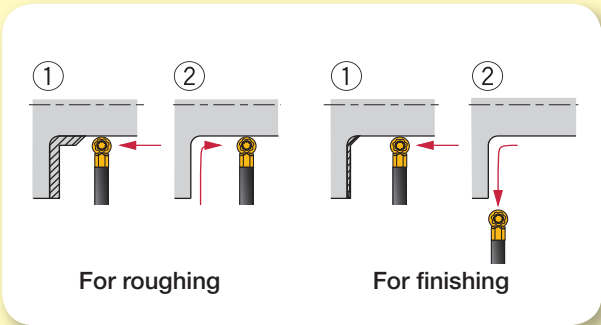
Preventing the ring burr

When traversing, ring burr may be left at the end. To prevent this, stop cutting before the end and remove remaining portion by plunging.



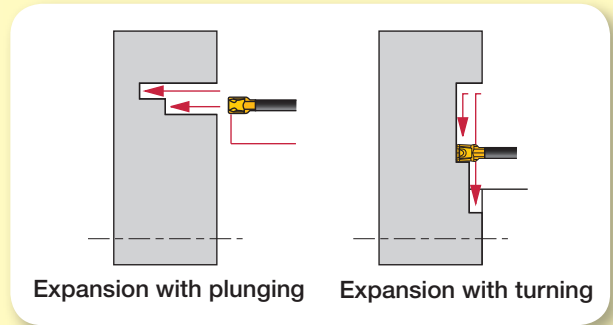
Machining with full radius insert

For roughing operation, groove wall should be cut by plunging. When finishing, if ap is less than 5% of insert radius, pull machining can be applied.



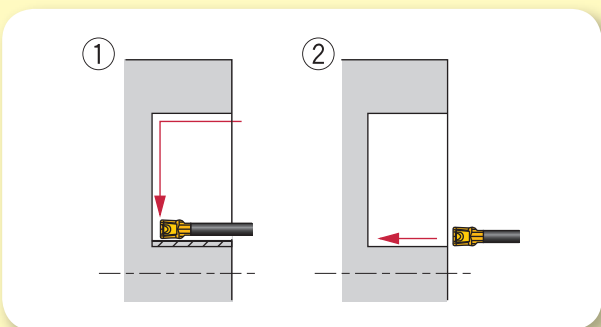
Expanding the face groove

When expanding the face groove, the blade should be selected depend on the outer diameter. And the machining direction should be from outside to inside.



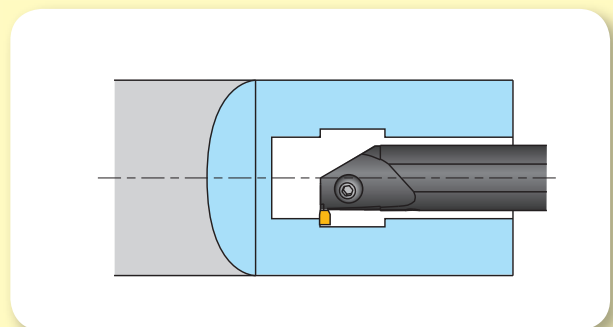
Face profiling

When profiling on the face, the tool path should be from outside to inside. And the inside wall should be cut by plunging.



Expanding the internal groove

When expanding the internal groove, the tool path should be referred to paths in external grooving.

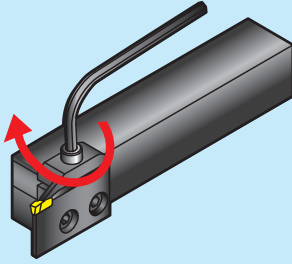


Precautions for use

1

Clamping torque for screw

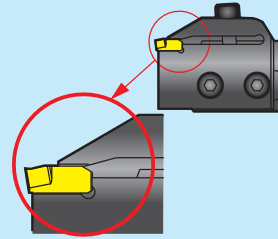
Recommended torque for clamping screw is 4 – 5 N·m.



2

When installing the insert

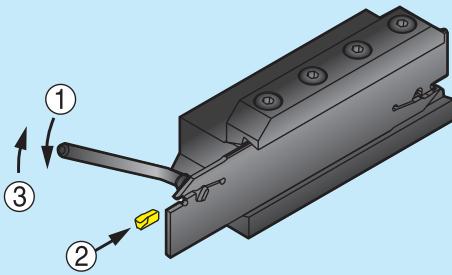
Install the insert until it touches the end of seat.



3

When installing insert into the blade

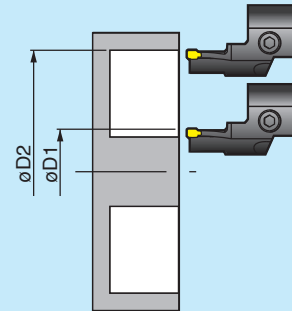
- ① Insert the wrench (CTL-2) into the blade and twist in CW.
- ② Install the insert until it touches the end of seat.
- ③ When twisting the wrench in CCW, the insert is clamped.



4

Definition of Max and Min diameter of face grooving

In face grooving, a specific blade should be selected depending on the diameter. Please check the catalog for details. $\phi D2$ shows the max diameter and $\phi D1$ shows the min diameter in the range. In diameters of this range, the tool doesn't interfere with groove. If expanding the groove to larger diameter than $\phi D2$, there is no interference. If expanding groove to smaller diameter than $\phi D1$, the tool may interfere with groove wall.

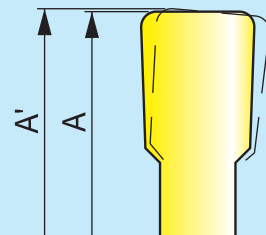
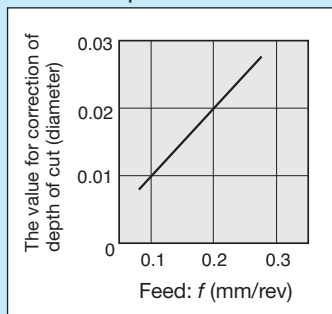


5

Precautions for turning

When traversing, the tool is bent by cutting force and the end cutting edge angle is formed. If traversing with large depth of cut or high feed rate, the flexure of tool becomes larger and the machined diameter may be different from programmed value. To prevent this, trial machining and correcting the condition based on the difference between programmed and machined values are required. For your reference, the corrected value when machining carbon steel are shown in the graph.

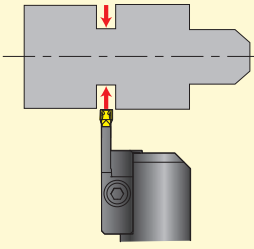
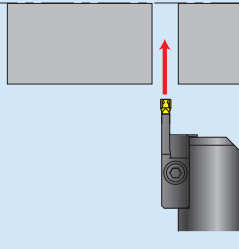
Reference: the value for correction of depth of cut

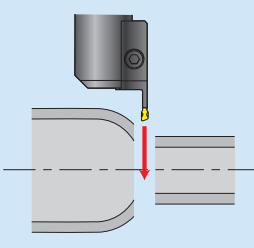
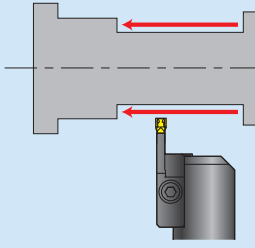


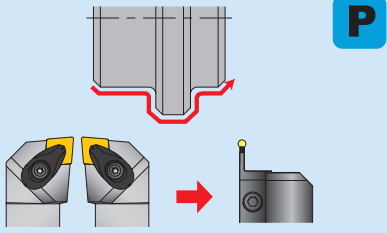
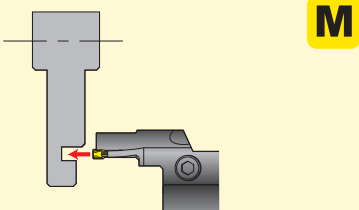
Troubleshooting

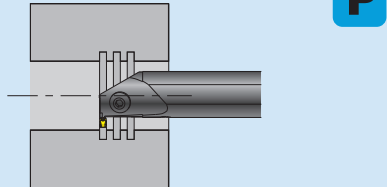
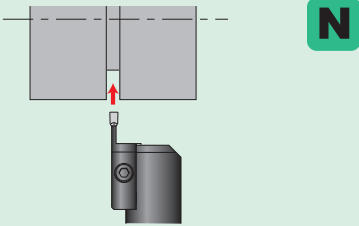
| Trouble / Countermeasure | Long and uncontrolled chips (When grooving) | Long and uncontrolled chips (When traversing) | Chattering | Rough surface | Behind or beyond the programmed value | Unstable wear on the edge | Fractures on the edge |
|---------------------------------------------------------------------------|---------------------------------------------|-----------------------------------------------|------------|---------------|---------------------------------------|---------------------------|-----------------------|
| Increase the feed | ● | ● | ● | | | | |
| Decrease the feed | | | | ● | | ● | ● |
| Increase the depth of cut | | ● | | | | | |
| Decrease the depth of cut | | | ● | ● | | ● | ● |
| Increase the cutting speed | | | | ● | | | |
| Decrease the cutting speed | ● | ● | ● | | ● | ● | ● |
| Change to Cermet grade | | | | ● | | | |
| Change to coated grade | | | | | | | ● |
| Feed with the pecking | ● | | | | | | |
| Apply coolant | | | | ● | | ● | |
| Check the corrected value by bent tool | | | | | ● | | |
| Check the damages on edge | | | | ● | ● | | |
| Change to optimum chipbreaker | ● | ● | ● | ● | ● | ● | ● |
| Shorten the tool overhang | | | ● | | | | |
| (For traversing operation) Use both sides of edge as equal as possible | | | | | | ● | ● |

Practical examples

| Workpiece type | | Machine parts | Machine parts |
|--------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Toolholder | | CGWSR2525-W30GR | CGWSR2525-W30GR-L |
| Insert | | WGE30 | WGE30 |
| Grade | | GH730 | GH730 |
| Workpiece material | | SUS316 / X5CrNiMo17-12-3 | S43C / C43 |
| | |  M |  P |
| Cutting conditions | Grooving width: W (mm) | 3 | 3 |
| | Cutting speed: V_c (m/min) | 75 | 75 |
| | Feed: f (mm/rev) | 0.1 | 0.08 |
| | Machining | External grooving | Parting off |
| Coolant | | Water soluble | Water soluble |
| Results | | My-T tool offers lower cutting forces providing higher accuracy and better surface finish rather than competitor's tool. | My-T tool provides excellent chip control, achieving doubled the tool life. |

| Workpiece type | | Hydraulic component | Automotive parts |
|--------------------|------------------------------|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Toolholder | | CGWSR2020-30GR | CGWSR2525-W50GR |
| Insert | | GE30L | WGT50 |
| Grade | | GH730 | T9125 |
| Workpiece material | | STKM15A / R50 | S45C / C45 |
| | |  P |  P |
| Cutting conditions | Grooving width: W (mm) | 3 | 5 |
| | Cutting speed: V_c (m/min) | 100 | 180 |
| | Feed: f (mm/rev) | 0.05 | 0.1 |
| | Machining | Parting off | Traversing |
| Coolant | | Water soluble | Water soluble |
| Results | | Due to the higher impact resistance of grade GH730, the number of workpiece processed can be increased by 40%. | Large chattering with competitor's tool. When machining with My-T tool, there is no chattering and tool life is 7 times longer. |

| Workpiece type | | Automotive parts | Gear |
|--------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Toolholder | | CGWSR2525-50GR | CGWSL2525-50S5575L |
| Insert | | GT50 | GT50 |
| Grade | | T9125 | T9125 |
| Workpiece material | | S45C / C45 | SUS304 / X5CrNi18-9 |
| | |  |  |
| Cutting conditions | Grooving width: <i>W</i> (mm) | 5 | 5 |
| | Cutting speed: <i>Vc</i> (m/min) | 150 | 115 |
| | Feed: <i>f</i> (mm/rev) | 0.25 | 0.13 |
| | Machining | Profiling | Face grooving |
| Coolant | | Water soluble | Water soluble |
| Results | | Previously, both right and left hand tools were needed. Instead of handed tools, only one My-T tool with GR type insert can machine, reducing the number of tools. | My-T tool can drastically improve the chip control and increase the number of workpiece processed by 40%. |

| Workpiece type | | Machine parts | Machine parts |
|--------------------|----------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Toolholder | | S25R-CGTR40 | CGWSR2525-30GR |
| Insert | | GE40 | GE30-AL |
| Grade | | NS9530 | KS05F |
| Workpiece material | | S45C / C45 | A2017 / AlCu4SiMg |
| | |  |  |
| Cutting conditions | Grooving width: <i>W</i> (mm) | 4 | 3 |
| | Cutting speed: <i>Vc</i> (m/min) | 120 | 300 |
| | Feed: <i>f</i> (mm/rev) | 0.1 | 0.1 |
| | Machining | Internal grooving | Aluminium wheel machining |
| Coolant | | Water soluble | Water soluble |
| Results | | By using My-T tool, the number of workpiece is increased by 25%. | My-T tool with AL type insert can drastically improve the surface finish. |



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