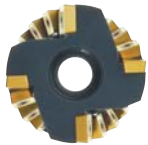
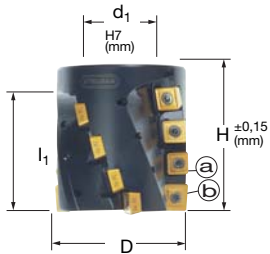
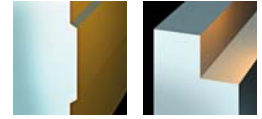


# 5210 VS 12 Long Edge Cutter



Shell Mill Fixation



DIN 69871 Shank



DIN 2080 Shank

## 5210 VS 12 Shell Mill Fixation

| EDP #  | Part Number       | Dimensions (mm) |     |                |                |                |                |      | No. of Inserts | Spares |        |        |     |
|--------|-------------------|-----------------|-----|----------------|----------------|----------------|----------------|------|----------------|--------|--------|--------|-----|
|        |                   | D               | L/H | l <sub>1</sub> | l <sub>2</sub> | l <sub>3</sub> | d <sub>1</sub> | EDP# |                | EDP#   | EDP#   |        |     |
| 021656 | 5210VS 12 -080R68 | 80              | 82  | 68             | -              | -              | 32             | a.   | 14             | 015266 | D5013T | 015241 | T20 |
|        |                   |                 |     |                |                |                |                | b.   | 2              | 015266 | D5013T | 015241 | T20 |
| 021657 | 5210VS 12 -100R77 | 100             | 92  | 77             | -              | -              | 40             | a.   | 27             | 015266 | D5013T | 015241 | T20 |
|        |                   |                 |     |                |                |                |                | b.   | 2              | 015266 | D5013T | 015241 | T20 |

## 5210 VS 12 DIN 69871 Shank

|        |                   |    |     |    |     |       |     |    |    |        |        |        |     |
|--------|-------------------|----|-----|----|-----|-------|-----|----|----|--------|--------|--------|-----|
| 021658 | 5210VS 12 G050R76 | 50 | 226 | 76 | 105 | 124,1 | G50 | a. | 13 | 015266 | D5013T | 015241 | T20 |
|        |                   |    |     |    |     |       |     | b. | 1  | 015266 | D5013T | 015241 | T20 |

## 5210 VS 12 DIN 2080 Shank

|        |                   |    |     |    |     |       |     |    |    |        |        |        |     |
|--------|-------------------|----|-----|----|-----|-------|-----|----|----|--------|--------|--------|-----|
| 021659 | 5210VS 12 T050R76 | 50 | 247 | 76 | 105 | 120,2 | T50 | a. | 13 | 015266 | D5013T | 015241 | T20 |
|        |                   |    |     |    |     |       |     | b. | 1  | 015266 | D5013T | 015241 | T20 |
| 021660 | 5210VS 12 T063R95 | 63 | 262 | 95 | 120 | 135,2 | T50 | a. | 20 | 015266 | D5013T | 015241 | T20 |
|        |                   |    |     |    |     |       |     | b. | 2  | 015266 | D5013T | 015241 | T20 |



## 5210 VS 12 Technical Advice

Milling Cutter Order Example: **5210VS12-080R68**

Milling Insert Order Example: **SOMT12M612SN-B PFZ**

**SOMT15M612SN-B PFZ**

For complete cutting conditions refer to page: **264**

Radial depth of cut, as a percentage of cutter diameter

To find programmed feedrate:

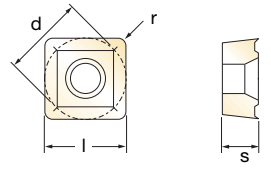
$$h_m = f_z \times \sqrt{\frac{\text{Depth of Cut}}{\text{Cutter diameter}}}$$

where:  $f_z$  = Feed per tooth  
 $h_m$  = Average chip thickness

### Radial Depth of Cut

| % of Cutter Diameter | Multiply feed rate by |
|----------------------|-----------------------|
| 1%                   | 6,5                   |
| 2%                   | 4,6                   |
| 3%                   | 3,8                   |
| 4%                   | 3,3                   |
| 5%                   | 2,9                   |
| 6%                   | 2,7                   |
| 7%                   | 2,5                   |
| 8%                   | 2,3                   |
| 9%                   | 2,2                   |
| 10%                  | 2,1                   |
| 15%                  | 1,7                   |
| 20%                  | 1,5                   |
| 25%                  | 1,3                   |
| 30%                  | 1,2                   |
| 40%                  | 1,0                   |
| 50%                  | 1,0                   |
| 60%                  | 1,0                   |
| 70%                  | 1,0                   |
| 80%                  | 1,0                   |
| 90%                  | 1,0                   |
| 100%                 | 1,0                   |

## Inserts for 5210 VS 12



| EDP#   | Part Number      | Grade    | Application & Material |                      |                  | Dimensions (mm) |       |     |     |                    |
|--------|------------------|----------|------------------------|----------------------|------------------|-----------------|-------|-----|-----|--------------------|
|        |                  |          | Roughing<br>▼          | Semi-Finishing<br>▼▼ | Finishing<br>▼▼▼ | d               | l     | s   | r   | h <sub>m</sub> min |
| 017329 | SOMT 12 M612SN-B | MP91M a. |                        |                      |                  | 12,7            | 12,7  | 6,0 | 1,2 | 0,15               |
| 017733 | SOMT 12 M612SN-B | GH1 a.   |                        |                      |                  | 12,7            | 12,7  | 6,0 | 1,2 | 0,15               |
| 017734 | SOMT 12 M612SN-B | PFZ a.   | ◆                      |                      |                  | 12,7            | 12,7  | 6,0 | 1,2 | 0,15               |
| 017732 | SOMT 12 M612SN-B | SF30 a.  |                        |                      |                  | 12,7            | 12,7  | 6,0 | 1,2 | 0,15               |
| 017735 | SOMT 12 M612SN-B | SFZ a.   | ◆                      |                      |                  | 12,7            | 12,7  | 6,0 | 1,2 | 0,15               |
| 015191 | SOMT 12 M612SN-B | X44 a.   |                        |                      |                  | 12,7            | 12,7  | 6,0 | 1,2 | 0,15               |
| 015190 | SOMT 12 M612SN-B | X500 a.  | ◆                      |                      |                  | 12,7            | 12,7  | 6,0 | 1,2 | 0,15               |
| 017330 | SOMT 15 M612SN-B | MP91M b. |                        |                      |                  | 15,88           | 15,88 | 6,0 | 1,2 | 0,15               |
| 017737 | SOMT 15 M612SN-B | GH1 b.   |                        |                      |                  | 15,88           | 15,88 | 6,0 | 1,2 | 0,15               |
| 017738 | SOMT 15 M612SN-B | PFZ b.   | ◆                      |                      |                  | 15,88           | 15,88 | 6,0 | 1,2 | 0,15               |
| 017736 | SOMT 15 M612SN-B | SF30 b.  |                        |                      |                  | 15,88           | 15,88 | 6,0 | 1,2 | 0,15               |
| 017739 | SOMT 15 M612SN-B | SFZ b.   | ◆                      |                      |                  | 15,88           | 15,88 | 6,0 | 1,2 | 0,15               |
| 015193 | SOMT 15 M612SN-B | X44 b.   |                        |                      |                  | 15,88           | 15,88 | 6,0 | 1,2 | 0,15               |
| 015192 | SOMT 15 M612SN-B | X500 b.  | ◆                      |                      |                  | 15,88           | 15,88 | 6,0 | 1,2 | 0,15               |

SOMT 12\_



SOMT 15\_



## Recommended Cutting Conditions

| Material                  | Speed                  | ▼ Roughing                       | D.O.C.             | Speed               | ▼▼ Semi-Finishing      | D.O.C. | Speed                       | ▼▼▼ Finishing       | D.O.C. |
|---------------------------|------------------------|----------------------------------|--------------------|---------------------|------------------------|--------|-----------------------------|---------------------|--------|
|                           | V <sub>C</sub> (m/min) | Feed/Rev.<br>h <sub>m</sub> (mm) |                    | a <sub>p</sub> (mm) | V <sub>C</sub> (m/min) |        | Feed<br>h <sub>m</sub> (mm) | a <sub>p</sub> (mm) |        |
| ◆ Unalloyed Steels        | 180 - 220              | 0,30 - 0,50                      | See I <sub>1</sub> | -                   | -                      | -      | -                           | -                   | -      |
| ◆ Alloyed Steels          | 70 - 110               | 0,25 - 0,45                      | See I <sub>1</sub> | -                   | -                      | -      | -                           | -                   | -      |
| ◆ Stainless Steels        | -                      | -                                | -                  | -                   | -                      | -      | -                           | -                   | -      |
| ◆ PH Stainless            | -                      | -                                | -                  | -                   | -                      | -      | -                           | -                   | -      |
| ◆ Cast Irons              | 140 - 280              | 0,25 - 0,45                      | See I <sub>1</sub> | -                   | -                      | -      | -                           | -                   | -      |
| ◆ Aluminium & Alloys      | -                      | -                                | -                  | -                   | -                      | -      | -                           | -                   | -      |
| ◆ High Temp. Alloys       | -                      | -                                | -                  | -                   | -                      | -      | -                           | -                   | -      |
| ◆ Hard Steels (52-56 HRC) | -                      | -                                | -                  | -                   | -                      | -      | -                           | -                   | -      |

h<sub>m</sub> = average chip thickness

## Star Guide Key to Recommended Tools

| Material Designations |     |                  |     |                  |     |                    |     |                   |
|-----------------------|-----|------------------|-----|------------------|-----|--------------------|-----|-------------------|
|                       | ◆ P | Unalloyed Steels | ◆ M | Stainless Steels | ◆ K | Cast Irons         | ◆ S | High Temp. Alloys |
|                       | ◆ P | Alloyed Steels   | ◆ M | PH Stainless     | ◆ N | Aluminium & Alloys | ◆ H | Hard Materials    |