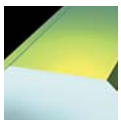
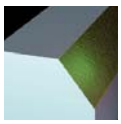
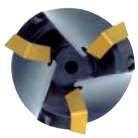
# 7745 VSE 09 Milling Cutter

## 7745 VSE 09 Weldon Shank

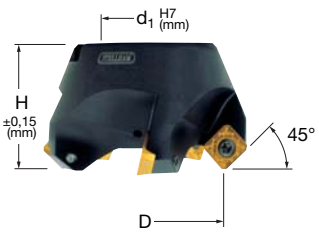
| EDP # | Part Number | Dimensions (mm) D | L/H | $l_1$ | $d_1$ | $a_{max.}$ | Plunge max. | No. of Inserts | Spares EDP# | | EDP# | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 021783 | **7745VSE 09 WA016Z02R** | 16 | 75 | 22 | 16 | 5 | 4 | 2 | 015269 | F3508T | 015240 | T15 |
| 021784 | **7745VSE 09 WA020Z02R** | 20 | 82 | 28 | 20 | 5 | 4 | 2 | 015269 | F3508T | 015240 | T15 |
| 021785 | **7745VSE 09 WA025Z03R** | 25 | 96 | 35 | 25 | 5 | 4 | 3 | 015064 | F3510T | 015240 | T15 |
| 021786 | **7745VSE 09 WA032Z03R** | 32 | 100 | 35 | 32 | 5 | 4 | 3 | 015064 | F3510T | 015240 | T15 |
| 021787 | **7745VSE 09 WA040Z04R** | 40 | 110 | 45 | 32 | 5 | 4 | 4 | 015064 | F3510T | 015240 | T15 |

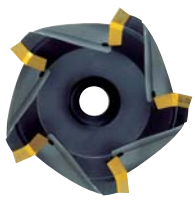



Weldon Shank

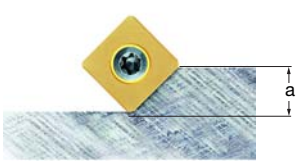
## 7745 VSE 09 Shell Mill Fixation

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 021771 | **7745VSE 09 -A032Z04R** | 32 | 30 | - | 13 | 5 | 4 | 4 | 015064 | F3510T | 015240 | T15 |
| 021772 | **7745VSE 09 -A040Z05R** | 40 | 40 | - | 16 | 5 | 4 | 5 | 015064 | F3510T | 015240 | T15 |
| 021773 | **7745VSE 09 -A050Z05R** | 50 | 40 | - | 22 | 5 | 4 | 5 | 015064 | F3510T | 015240 | T15 |
| 021774 | **7745VSE 09 -A050Z06R** | 50 | 40 | - | 22 | 5 | 4 | 6 | 015064 | F3510T | 015240 | T15 |
| 021775 | **7745VSE 09 -A063Z05R** | 63 | 40 | - | 22 | 5 | 4 | 5 | 015064 | F3510T | 015240 | T15 |
| 021776 | **7745VSE 09 -A063Z07R** | 63 | 40 | - | 22 | 5 | 4 | 7 | 015064 | F3510T | 015240 | T15 |
| 021777 | **7745VSE 09 -A080Z06R** | 80 | 50 | - | 27 | 5 | 4 | 6 | 015064 | F3510T | 015240 | T15 |
| 021778 | **7745VSE 09 -A080Z09R** | 80 | 50 | - | 27 | 5 | 4 | 9 | 015064 | F3510T | 015240 | T15 |
| 021779 | **7745VSE 09 -A100Z07R** | 100 | 50 | - | 32 | 5 | 4 | 7 | 015064 | F3510T | 015240 | T15 |
| 021780 | **7745VSE 09 -A100Z11R** | 100 | 50 | - | 32 | 5 | 4 | 11 | 015064 | F3510T | 015240 | T15 |
| 021781 | **7745VSE 09 -A125Z08R** | 125 | 63 | - | 40 | 5 | 4 | 8 | 015064 | F3510T | 015240 | T15 |
| 021782 | **7745VSE 09 -A125Z12R** | 125 | 63 | - | 40 | 5 | 4 | 12 | 015064 | F3510T | 015240 | T15 |



Shell Mill Fixation




Depth of Cut (a)

## 7745 VSE 09 Technical Advice

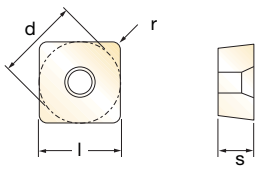
Milling Cutter Order Example: **7745VSE09WA016Z02R**
Milling Insert Order Example: **SDHT09T3AEEN -421 MP91M**
For complete cutting conditions refer to page: **264**

Feedrate compensation: For 45° cutting, divide the $h_m$ value by the sine of the approach angle (the sine of 45° = 0,707)

ie: $\frac{h_m}{0,707}$ or $\frac{0,08}{0,707}$ = 0,113 mm programmed feed rate

# Inserts for 7745 VSE 09

| EDP# | Part Number | Grade | Application & Material ▼ Roughing | ▼▼ Semi-Finishing | ▼▼▼ Finishing | Dimensions (mm) d | l | s | r | $h_m$ min |
|---|---|---|---|---|---|---|---|---|---|---|
| 017714 | SDCT 09 T3AEEN | SF30 | | | | 9,52 | 9,52 | 3,97 | Facet | 0,04 |
| 017242 | SDCT 09 T3AEFN | GH1 | ◆ | ◆ | ◆ | 9,52 | 9,52 | 3,97 | Facet | 0,02 |
| 017715 | SDCW 09 T3AEFN | SFZ | | | ◆ | 9,52 | 9,52 | 3,97 | Facet | 0,02 |
| 017718 | SDCW 09 T3AETN | GH1 | | | | 9,52 | 9,52 | 3,97 | Facet | 0,15 |
| 018204 | SDCW 09 T3AETN | CN35 | | | | 9,52 | 9,52 | 3,97 | Facet | 0,12 |
| 017716 | SDCW 09 T3AETN | SF30 | | | | 9,52 | 9,52 | 3,97 | Facet | 0,15 |
| 017717 | SDCW 09 T3AETN | X44 | | | | 9,52 | 9,52 | 3,97 | Facet | 0,15 |
| 017726 | SDEX 09 T3AEEN-701 | PFZ | | | | 9,52 | 9,52 | 3,97 | Facet | 0,03 |
| 015148 | SDEX 09 T3AEFN-701 | GH1 | | | | 9,52 | 9,52 | 3,97 | Facet | 0,02 |
| 015229 | SDEX 09 T3AEFN-701 | SFZ | | | | 9,52 | 9,52 | 3,97 | Facet | 0,02 |
| 017320 | SDHT 09 T3AEEN-421 | MP91M | | | | 9,52 | 9,52 | 3,97 | Facet | 0,03 |
| 023356 | SDHT 09 T3AEEN-421 | PFZ | | | | 9,52 | 9,52 | 3,97 | Facet | 0,03 |
| 015186 | SDHT 09 T3AEEN-421 | X500 | | | ◆◆ | 9,52 | 9,52 | 3,97 | Facet | 0,03 |
| 027733 | SDHT 09 T3AEEN-421 | SP6564 | | | | 9,52 | 9,52 | 3,97 | Facet | 0,03 |
| 017323 | SDHW 09 T3AETN | MP91M | | | | 9,52 | 9,52 | 3,97 | Facet | 0,10 |
| 023358 | SDHW 09 T3AETN | PFZ | | | | 9,52 | 9,52 | 3,97 | Facet | 0,10 |
| 015231 | SDHW 09 T3AETN | X500 | | | | 9,52 | 9,52 | 3,97 | Facet | 0,10 |
| 027741 | SDHW 09 T3AETN | SP6564 | | | | 9,52 | 9,52 | 3,97 | Facet | 0,10 |
| 026600 | SDKT 09 T3AEEN-45 | MP91M | | ◆◆ | ◆◆ | 9,52 | 9,52 | 3,97 | Facet | 0,05 |
| 026602 | SDKT 09 T3AEEN-45 | X500 | | ◆◆ | | 9,52 | 9,52 | 3,97 | Facet | 0,05 |
| 027738 | SDKT 09 T3AEEN-45 | SP6564 | | ◆◆ | ◆◆ | 9,52 | 9,52 | 3,97 | Facet | 0,05 |
| 017319 | SDET 09 T308EN | MP91M | | | | 9,52 | 9,52 | 3,97 | 0,8 | 0,03 |
| 017724 | SDET 09 T308EN | PFZ | | | | 9,52 | 9,52 | 3,97 | 0,8 | 0,03 |
| 017725 | SDET 09 T308FN | GH1 | | | | 9,52 | 9,52 | 3,97 | 0,8 | 0,02 |
| 017325 | SDMT 09 T308EN-41 | MP91M | ◆ | | | 9,52 | 9,52 | 3,97 | 0,8 | 0,04 |
| 023362 | SDMT 09 T308EN-41 | PFZ | | | | 9,52 | 9,52 | 3,97 | 0,8 | 0,04 |
| 014410 | SDMT 09 T308EN-41 | X500 | | | | 9,52 | 9,52 | 3,97 | 0,8 | 0,04 |
| 027736 | SDMT 09 T308EN-41 | SP6564 | ◆◆ | | | 9,52 | 9,52 | 3,97 | 0,8 | 0,04 |
| 017327 | SDMW 09 T308TN | MP91M | ◆ | | | 9,52 | 9,52 | 3,97 | 0,8 | 0,15 |
| 027742 | SDMW 09 T308TN | SP6564 | | | | 9,52 | 9,52 | 3,97 | 0,8 | 0,15 |
| 023363 | SDMW 09 T308TN | PFZ | | | | 9,52 | 9,52 | 3,97 | 0,8 | 0,15 |
| 015232 | SDMW 09 T308TN | X500 | | | | 9,52 | 9,52 | 3,97 | 0,8 | 0,12 |




SDCT 09_

SDCW 09_

SDEX 09_ -701

SDHT 09_ -421

SDHW 09_

SDKT 09_ -45

SDET 09_

SDMT 09_ -41

SDMW 09_

# SD_09 Recommended Cutting Conditions

| Material | ▼ Roughing Speed $V_c$ (m/min) | Feed $h_m$ (mm) | D.O.C. $a_p$ (mm) | ▼▼ Semi-Finishing Speed $V_c$ (m/min) | Feed $h_m$ (mm) | D.O.C. $a_p$ (mm) | ▼▼▼ Finishing Speed $V_c$ (m/min) | Feed $h_m$ (mm) | D.O.C. $a_p$ (mm) |
|---|---|---|---|---|---|---|---|---|---|
| Unalloyed Steels | 180 - 220 | 0,12 - 0,30 | 3,0 - 5,0 | 220 - 260 | 0,10 - 0,25 | 1,0 - 3,0 | 220 - 300 | 0,08 - 0,15 | 0,2 - 1,0 |
| Alloyed Steels | 70 - 110 | 0,12 - 0,25 | 3,0 - 5,0 | 100 - 150 | 0,10 - 0,20 | 1,0 - 3,0 | 100 - 195 | 0,08 - 0,15 | 0,2 - 1,0 |
| Stainless Steels | 120 - 140 | 0,12 - 0,22 | 3,0 - 5,0 | 140 - 180 | 0,10 - 0,20 | 1,0 - 3,0 | 180 - 230 | 0,05 - 0,15 | 0,2 - 1,0 |
| PH Stainless | - | - | - | 70 - 85 | 0,10 - 0,18 | 1,0 - 3,0 | 80 - 100 | 0,05 - 0,10 | 0,2 - 1,0 |
| Cast Irons | 140 - 280 | 0,12 - 0,25 | 3,0 - 5,0 | 180 - 300 | 0,10 - 0,20 | 1,0 - 3,0 | 200 - 350 | 0,05 - 0,15 | 0,2 - 1,0 |
| Aluminium & Alloys | 275 - 450 | 0,10 - 0,22 | 3,0 - 5,0 | 400 - 750 | 0,08 - 0,18 | 1,0 - 3,0 | 700 - 1000 | 0,05 - 0,15 | 0,2 - 1,0 |
| High Temp. Alloys | - | - | - | 35 - 50 | 0,10 - 0,18 | 1,0 - 3,0 | 45 - 60 | 0,05 - 0,10 | 0,2 - 1,0 |
| Hard Steels (52-56 HRC) | - | - | - | - | - | - | 50 - 100 | 0,03 - 0,06 | 0,2 - 0,5 |

$h_m$ = 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 |



STELLRAM®