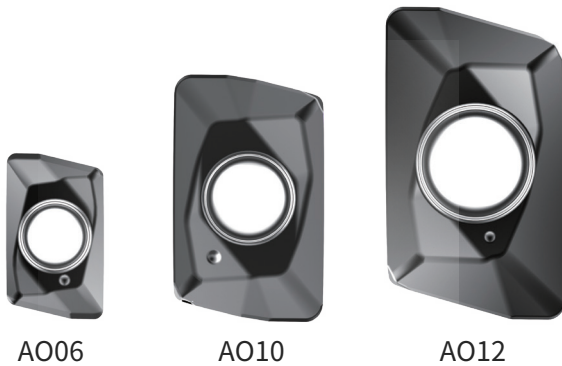


Shoulder Milling Cutter ——A0 Series

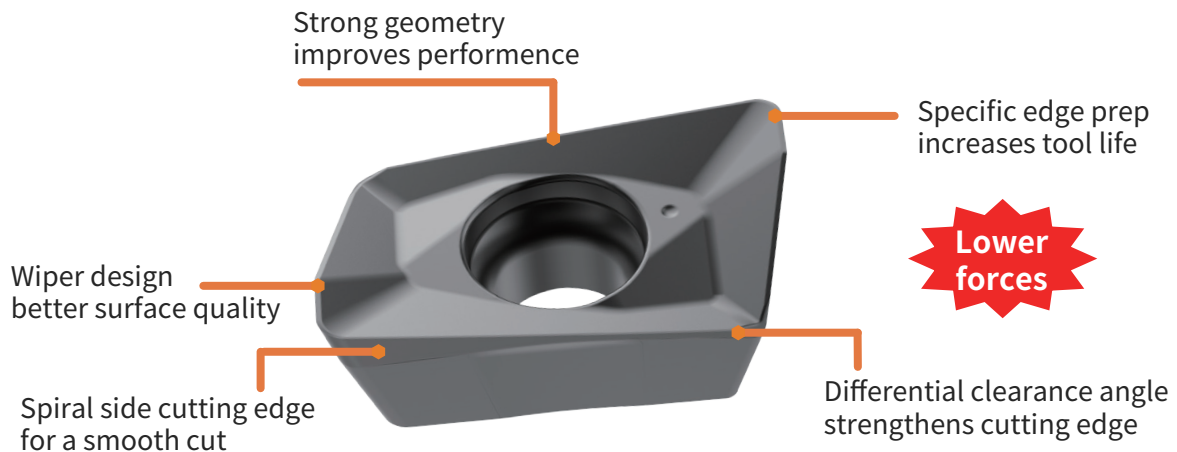


• Features of AO inserts

Achteck has launched its AO series milling cutters. The two-edged inserts have a spiral side cutting edge design that can achieve lower cutting forces for a smooth cut. The pressed and ground precision inserts are suitable for all kinds of cutting conditions. The inserts which have our own designed substrate and coating combination can meet many different machining requirements on various materials with significant advantages in the S and M material groups.

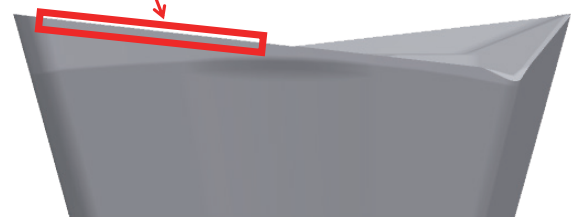


- Approach angle: True 90°, to achieve precise square machining.
- Spiral side cutting edge design, offers lower cutting forces and a smoother cut on all applications.
- Wiper design provides better surface quality.
- Full range of grades for the 3 insert sizes - AO06, AO10 and AO12.
- Porcupine cutters with AO inserts are highly efficient and improve MRR. Max. D.O.C: 85mm.
- The AO cutter series is available in a variety of connections for your specific needs. Arbor/cylindrical/Weldon/screw on.



Accurate 90° approaching angle and large positive inclination angle

Smooth cut, reduces the cutting forces and risk of vibration

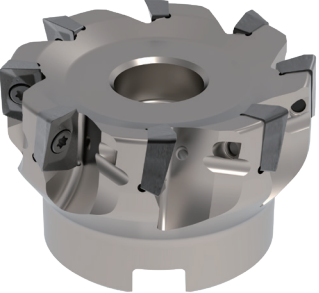



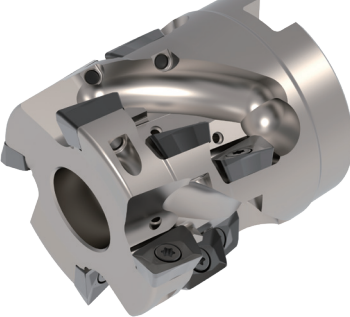

Spiral side cutting edge design

• AO series cutter body introduction

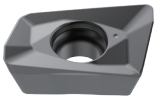

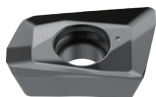



| AO06 Cutter specification | |
|---|---|
|  | |
|  | |
| Diameter range | ø10-ø25mm |
| Corner radius | R0.4/0.8mm |
| Max. DOC | 5mm |
| Interface of body | cylindrical |
| ISO | P M K S |

| AO10 Cutter specification | |
|---|---|
|  | |
|  | |
| Diameter range | ø16-ø40mm |
| Corner radius | R0.8/1.6/3.1mm |
| Max. DOC | 9mm |
| Interface of body | Cylindrical/weldon/arbor |
| ISO | P M K S H |

| AO12 Cutter specification | |
|---|---|
|  | |
|  | |
| Diameter range | ø20-ø80mm |
| Corner radius | R0.4/0.8/1.2/1.6/2.0/2.4/3.1/4.0mm |
| Max. DOC | 11mm |
| Interface of body | Cylindrical/weldon/arbor/screw on |
| ISO | P M K N S H |

| APE90-AO12 Porcupine cutter specification | |
|---|---|
|  | |
|  | |
| Diameter range | ø25-ø80mm |
| Corner radius | R0.4/0.8/1.2/1.6/2.0/2.4/3.1/4.0mm |
| Max. DOC | 85mm |
| Interface of body | Cylindrical/arbor |
| ISO | P M K N S H |

◆ Geometries

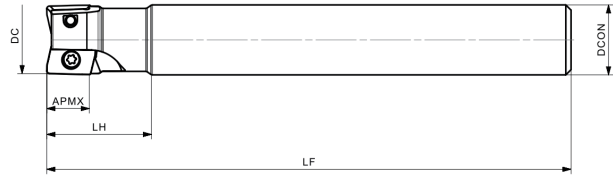
| Insert | Geometry | Cutting edge | Application range |
|---|----------|---|---|
|  | MM4 |  | <ul style="list-style-type: none"> • For medium cutting conditions • 1st choice for general machining |
|  | MM3 |  | <ul style="list-style-type: none"> • For good cutting conditions, finishing • Low cutting force, can be used for low-power machines |
|  | FM2 |  | <ul style="list-style-type: none"> • Sharp geometry • Low cutting force • Used for aluminum machining |

◆ Grades

| Grade | Coating type | ISO Material Group | | | | | |
|--------|--------------|--------------------|---|---|---|---|---|
| | | P | M | K | N | S | H |
| AP251U | PVD | ● | ◐ | ◐ | | | |
| AP351M | PVD | ◐ | ● | | | ◐ | |
| AP403M | PVD | ◐ | ● | | | ◐ | |
| AP251K | PVD | | | ● | | | |
| AP403S | PVD | | ◐ | | | ● | |
| AP151H | PVD | | | ◐ | | | ● |
| AW100K | Uncoating | | | | ● | | |

Note: ●1st choice ◐2nd

ASM90-AO06

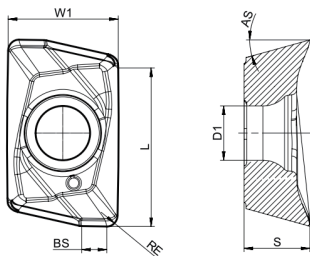


| Product code | DC | DCON | LF | LH | APMX | Coolant | Weight (kg) | Z | Insert |
|--------------------------------|----|------|-----|----|------|---------|-------------|---|-------------|
| ASM90-010-Z02-C10R-AO06-L060-C | 10 | 10 | 60 | 20 | 5 | | 0.1 | 2 | AOMT 0602.. |
| ASM90-010-Z02-C10R-AO06-L100-C | 10 | 10 | 100 | 35 | 5 | | 0.1 | 2 | |
| ASM90-012-Z03-C12R-AO06-L070-C | 12 | 12 | 70 | 20 | 5 | | 0.1 | 3 | |
| ASM90-012-Z03-C12R-AO06-L120-C | 12 | 12 | 120 | 35 | 5 | | 0.1 | 3 | |
| ASM90-014-Z03-C16R-AO06-L100-C | 14 | 14 | 100 | 35 | 5 | | 0.1 | 3 | |
| ASM90-016-Z04-C16R-AO06-L090-C | 16 | 16 | 90 | 35 | 5 | | 0.1 | 4 | |
| ASM90-016-Z03-C16R-AO06-L150-C | 16 | 16 | 150 | 35 | 5 | | 0.2 | 3 | |
| ASM90-020-Z05-C20R-AO06-L100-C | 20 | 20 | 100 | 35 | 5 | | 0.2 | 5 | |
| ASM90-020-Z04-C20R-AO06-L150-C | 20 | 20 | 150 | 35 | 5 | | 0.3 | 4 | |
| ASM90-025-Z05-C25R-AO06-L100-C | 25 | 25 | 100 | 35 | 5 | | 0.3 | 5 | |

Note: with internal coolant
 without internal coolant

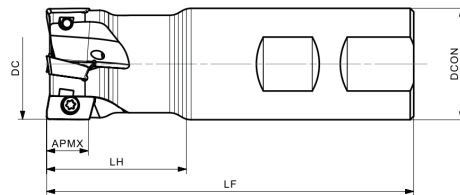
| Dimension(mm) | Accessory | | |
|---------------|------------|---------|--------|
| Dia. Range | Screw | Wrench | Torque |
| Ø10-Ø25 | SP01803655 | FT-TP05 | 0.3Nm |
| | | | |

ASM90-AO06 Insert

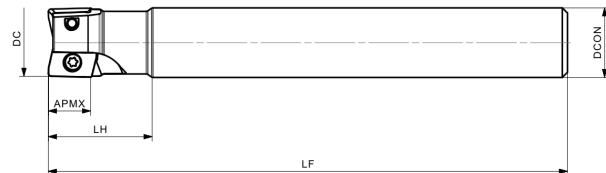


| Insert | Product code | Dimensions (mm) | | | | | | Recommended cutting condition | | | | | | | |
|--------|-------------------|-----------------|-----|-----|-----|-----|-----|--|--------|--------|--------|--------|--------|--------|--|
| | | L | W1 | S | RE | BS | D1 | Good condition ● General condition ◐ Bad condition ◑ | | | | | | | |
| | | | | | | | | P | | M | | K | | S | |
| | | | | | | | | AP251U | AP351U | AP351M | AP403M | AC301K | AP251K | AP403S | |
| | AOMT 060204ER-MM3 | 5.8 | 4.1 | 2.4 | 0.4 | 0.9 | 2.0 | ● | | ● | ● | | | ● | |
| | AOMT 060208ER-MM3 | 5.8 | 4.1 | 2.4 | 0.8 | 0.5 | 2.0 | ● | | ● | ● | | | ● | |

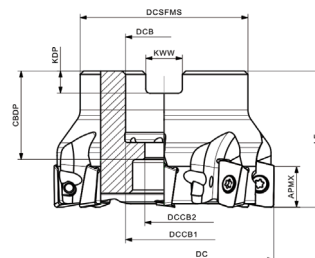
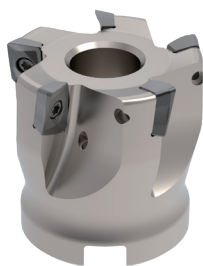
• **ASM90-AO10**



| Product code | DC | DCON | LF | LH | APMX | Coolant | Weight (kg) | Z | Insert |
|---------------------------|----|------|-----|----|------|---------|-------------|---|-------------|
| ASM90-025-Z04-W25R-AO10-C | 25 | 25 | 100 | 35 | 9 | | 0.4 | 4 | AOMT 10T3.. |
| ASM90-032-Z05-W32R-AO10-C | 32 | 32 | 110 | 35 | 9 | | 0.6 | 5 | |



| Product code | DC | DCON | LF | LH | APMX | Coolant | Weight (kg) | Z | Insert |
|--------------------------------|----|------|-----|----|------|---------|-------------|---|-------------|
| ASM90-016-Z02-C16R-AO10-L130-C | 16 | 16 | 130 | 26 | 9 | | 0.2 | 2 | AOMT 10T3.. |
| ASM90-020-Z03-C20R-AO10-L150-C | 20 | 20 | 150 | 30 | 9 | | 0.4 | 3 | |

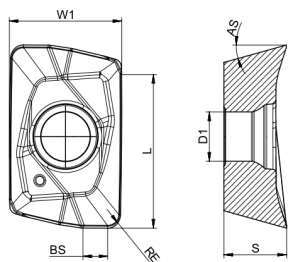


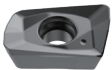
| Product code | DC | DCSFMS | DCB | DCCB1 | DCCB2 | LF | CDBP | KDP | KWW | APMX | Coolant | Weight (kg) | Z | Insert |
|---------------------------|----|--------|-----|-------|-------|----|------|-----|-----|------|---------|-------------|---|-------------|
| ASM90-040-Z05-A16R-AO10-C | 40 | 35 | 16 | 14 | 9 | 40 | 24 | 5.8 | 8.4 | 9 | | 0.2 | 5 | AOMT 10T3.. |

Note: with internal coolant
 without internal coolant

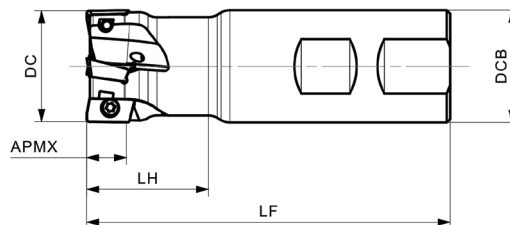
| Dimension(mm) | Accessory | | |
|---------------|-------------|---------|--------|
| Dia. Range | Screw | Wrench | Torque |
| Ø10-Ø25 | SP02506450H | FT-TP08 | 1.2Nm |
| | | | |

◆ **ASM90-AO10 Insert**

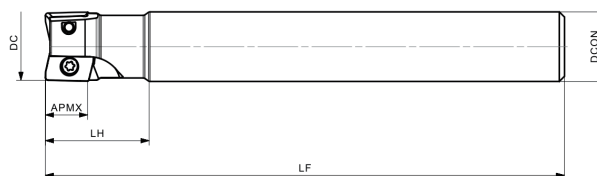


| Insert | Product code | Dimensions (mm) | | | | | | Recommended cutting condition | | | | | | | | |
|---|-------------------|-----------------|-----|-----|-----|-----|-----|-------------------------------|--------|--------|--------|--------|--------|--------|--------|---|
| | | L | W1 | S | RE | BS | D1 | P | | M | | K | | S | | H |
| | | | | | | | | AP251U | AP351U | AP351M | AP403M | AC301K | AP251K | AP403S | AP151H | |
|  | AOMT 10T308ER-MM4 | 9.4 | 8.0 | 3.8 | 0.8 | 1.5 | 3.0 | ● | | ● | | | | | ● | ● |
| | AOMT 10T316ER-MM4 | 9.4 | 8.0 | 3.8 | 1.6 | 1.2 | 3.0 | | | | ● | | | | ● | |
| | AOMT 10T331ER-MM4 | 9.4 | 8.0 | 3.8 | 3.1 | - | 3.0 | | | ● | | | | | ● | |

◆ **ASM90-AO12**



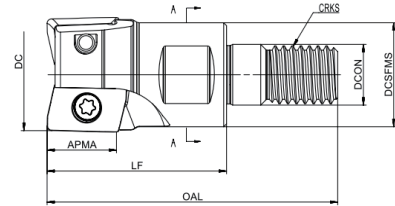
| Product code | DC | DCON | LF | LH | APMX | Coolant | Weight (kg) | Z | Insert |
|---------------------------|----|------|-----|----|------|---------|-------------|---|-------------|
| ASM90-020-Z02-W20R-AO12-C | 20 | 20 | 85 | 30 | 11 | | 0.2 | 2 | AO.T 1204.. |
| ASM90-025-Z03-W20R-AO12-C | 25 | 20 | 95 | 35 | 11 | | 0.2 | 3 | |
| ASM90-032-Z04-W32R-AO12-C | 32 | 32 | 105 | 40 | 11 | | 0.5 | 4 | |
| ASM90-040-Z04-W32R-AO12-C | 40 | 32 | 120 | 45 | 11 | | 0.7 | 4 | |



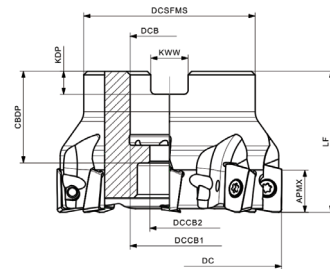
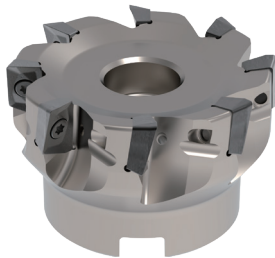
| Product code | DC | DCON | LF | LH | APMX | Coolant | Weight (kg) | Z | Insert |
|--------------------------------|----|------|-----|----|------|---------|-------------|---|-------------|
| ASM90-020-Z02-C20R-AO12-L150-C | 20 | 20 | 150 | 28 | 11 | | 0.3 | 2 | AO.T 1204.. |
| ASM90-025-Z03-C25R-AO12-L170-C | 25 | 25 | 170 | 33 | 11 | | 0.6 | 3 | |
| ASM90-032-Z04-C32R-AO12-L250-C | 32 | 32 | 250 | 35 | 11 | | 1.4 | 4 | |

Note: with internal coolant
 without internal coolant

• ASM90-AO12



| Product code | DC | DCSFMS | DCON | OAL | LF | CRKS | APMX | Coolant | Weight (kg) | Z | Insert |
|---------------------------|----|--------|------|-----|----|------|------|---------|-------------|---|-------------|
| ASM90-020-Z02-M10R-AO12-C | 20 | 23 | 10.5 | 51 | 31 | M10 | 11 | | 0.1 | 2 | AO.T 1204.. |
| ASM90-025-Z03-M12R-AO12-C | 25 | 30 | 12.5 | 59 | 37 | M12 | 11 | | 0.1 | 3 | |
| ASM90-032-Z04-M16R-AO12-C | 32 | 30 | 17 | 72 | 48 | M16 | 11 | | 0.2 | 4 | |
| ASM90-035-Z04-M16R-AO12-C | 35 | 32 | 17 | 72 | 48 | M16 | 11 | | 0.3 | 4 | |



| Product code | DC | DCSFMS | DCB | DCCB1 | DCCB2 | LF | CBDP | KDP | KWW | APMX | Coolant | Weight (kg) | Z | Insert |
|---------------------------|----|--------|-----|-------|-------|----|------|-----|------|------|---------|-------------|----|-------------|
| ASM90-040-Z04-A16R-AO12-C | 40 | 35 | 16 | 14 | 9 | 40 | 24 | 5.8 | 8.4 | 11 | | 0.2 | 4 | AO.T 1204.. |
| ASM90-050-Z05-A22R-AO12-C | 50 | 42 | 22 | 18 | 11 | 40 | 26 | 6.5 | 10.4 | 11 | | 0.3 | 5 | |
| ASM90-050-Z07-A22R-AO12-C | 50 | 42 | 22 | 18 | 11 | 40 | 26 | 6.5 | 10.4 | 11 | | 0.3 | 7 | |
| ASM90-063-Z06-A22R-AO12-C | 63 | 48 | 22 | 18 | 11 | 40 | 26 | 6.5 | 10.4 | 11 | | 0.5 | 6 | |
| ASM90-063-Z08-A22R-AO12-C | 63 | 48 | 22 | 18 | 11 | 40 | 26 | 6.5 | 10.4 | 11 | | 0.5 | 8 | |
| ASM90-080-Z07-A27R-AO12-C | 80 | 62 | 27 | 20 | 14 | 50 | 29 | 7.2 | 12.4 | 11 | | 1.2 | 7 | |
| ASM90-080-Z10-A27R-AO12-C | 80 | 62 | 27 | 20 | 14 | 50 | 29 | 7.2 | 12.4 | 11 | | 1.1 | 10 | |

Remark: Modify the tip of the cutter when inserts' radius over R2.4

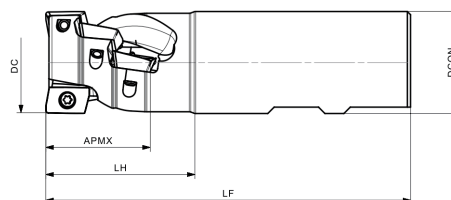
Modify the tip of the cutter to R1.5 when the radius of the mounted inserts is R2.4

Modify the tip of the cutter to R2.0 when the radius of the mounted inserts is R3.1

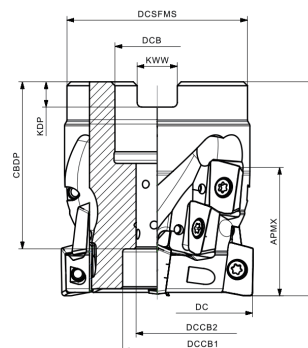
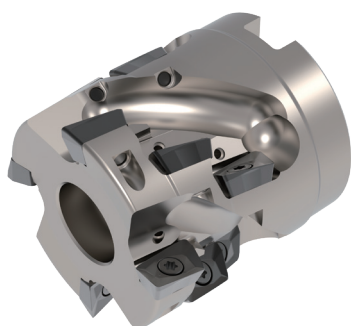
Modify the tip of the cutter to R3.0 when the radius of the mounted inserts is R4.0

Note: with internal coolant
 without internal coolant

• **APE90-AO12 Porcupine cutter**



| Product code | DC | DCON | LF | LH | APMX | Coolant | Weight (kg) | Z | Row | Insert quantity | Insert |
|---------------------------------|----|------|-----|----|------|---------|-------------|---|-----|-----------------|-------------|
| APE90-025-Z02-W25R-AO12-L32-F-C | 25 | 25 | 115 | 38 | 31 | | 0.3 | 2 | 3 | 6 | AO.T 1204.. |
| APE90-032-Z02-W32R-AO12-L32-F-C | 32 | 32 | 115 | 45 | 32 | | 0.6 | 2 | 3 | 6 | |
| APE90-040-Z03-W40R-AO12-L43-F-C | 40 | 40 | 140 | 67 | 42 | | 1.0 | 3 | 5 | 20 | |

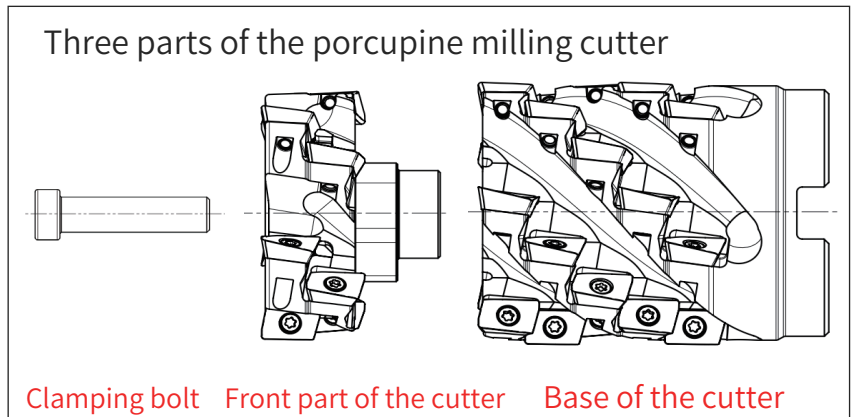
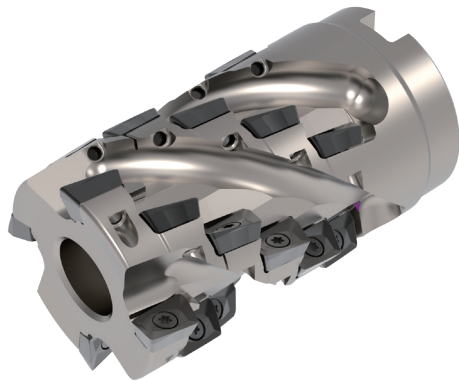


| Product code | DC | DCSFMS | DCB | DCCB1 | DCCB2 | LF | CBDP | KDP | KWW | APMX | Coolant | Weight (kg) | Z | Row | Insert quantity | Clamping bolt | Insert |
|---------------------------------|----|--------|-----|-------|-------|----|------|-----|------|------|---------|-------------|---|-----|-----------------|---------------|-------------|
| APE90-050-Z04-A22R-AO12-L32-F-C | 50 | 47 | 22 | 18 | 11 | 55 | 43 | 6.5 | 10.4 | 32 | | 0.4 | 4 | 3 | 12 | SH100400 | AO.T 1204.. |
| APE90-063-Z05-A27R-AO12-L43-F-C | 63 | 59.5 | 27 | 20 | 14 | 66 | 52 | 7.2 | 12.4 | 43 | | 1.0 | 5 | 4 | 20 | SH120500 | |
| APE90-080-Z06-A32R-AO12-L64-F-C | 80 | 76 | 32 | 26 | 18 | 88 | 69 | 8.2 | 14.4 | 63 | | 2.2 | 6 | 6 | 36 | SH160700 | |

Note: Clamping bolt included in packaging

Note: with internal coolant
 without internal coolant

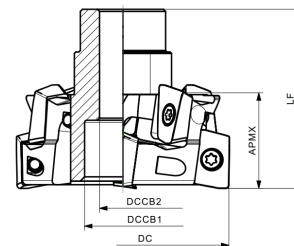
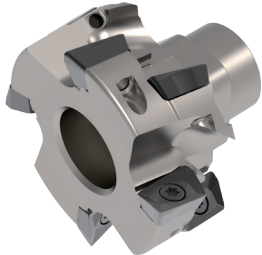
• APE90S-AO12 Porcupine milling cutter



Combination struction

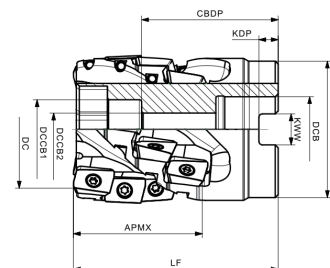
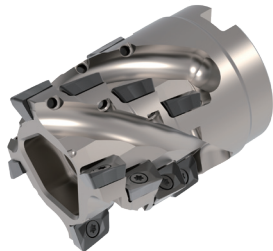
| Front part of the cutter | Base of the cutter | Segmented porcupine milling cutter |
|---------------------------|--------------------------------|------------------------------------|
| APE90H-050-Z04-AO12-L21-F | APE90B-050-Z04-A22R-AO12-L43-F | APE90S-050-Z04-A22R-AO12-L64-F |
| APE90H-063-Z05-AO12-L21-F | APE90B-063-Z05-A27R-AO12-L53-F | APE90S-063-Z05-A27R-AO12-L74-F |
| APE90H-080-Z06-AO12-L21-F | APE90B-080-Z06-A32R-AO12-L64-F | APE90S-080-Z06-A32R-AO12-L85-F |

Front part of porcupine milling cutter



| Product code | DC | DCCB1 | DCCB2 | LF | APMX | Coolant | Weight(kg) | Z | Row | Insert quantity | Insert |
|---------------------------|----|-------|-------|----|------|---------|------------|---|-----|-----------------|-------------|
| APE90H-050-Z04-AO12-L21-F | 25 | 18 | 11 | 64 | 24 | | 0.2 | 2 | 2 | 6 | AO.T 1204.. |
| APE90H-063-Z05-AO12-L21-F | 32 | 20 | 14 | 67 | 24 | | 0.4 | 2 | 2 | 6 | |
| APE90H-080-Z06-AO12-L21-F | 32 | 26 | 18 | 77 | 32 | | 0.6 | 2 | 2 | 8 | |

Base of porcupine milling cutter

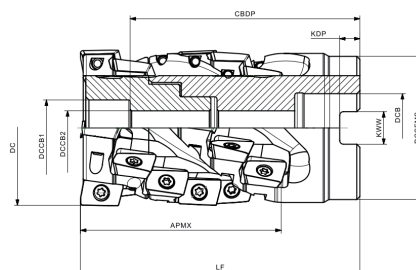
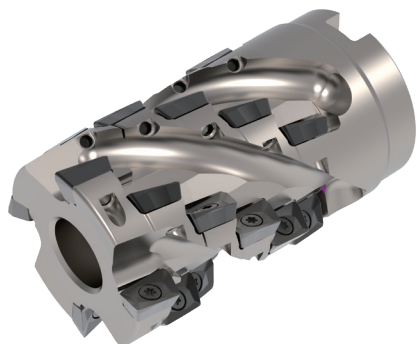


| Product code | DC | DCSFMS | DCB | DCCB1 | DCCB2 | LF | CBDP | KDP | KWW | APMX | Coolant | Weight (kg) | Z | Row | Insert quantity | Insert |
|--------------------------------|----|--------|-----|-------|-------|----|------|-----|------|------|---------|-------------|---|-----|-----------------|-------------|
| APE90B-050-Z04-A22R-AO12-L43-F | 50 | 46 | 22 | 20 | 11 | 69 | 46 | 6.5 | 10.4 | 43 | | 0.5 | 4 | 4 | 16 | AO.T 1204.. |
| APE90B-063-Z05-A27R-AO12-L53-F | 63 | 59 | 27 | 22 | 14 | 79 | 56 | 7.2 | 12.4 | 53 | | 1.1 | 5 | 5 | 25 | |
| APE90B-080-Z06-A32R-AO12-L64-F | 80 | 76 | 32 | 28 | 18 | 89 | 67.5 | 8.2 | 14.4 | 64 | | 2.2 | 6 | 6 | 36 | |

Note: Buying front and basic part of porcupine milling cutter are without clamping bolt and wrench

Note: with internal coolant
 without internal coolant

• **APE90S-AO12 Segmented porcupine milling cutter**



| Product code | DC | DCSFMS | DCB | DCCB1 | DCCB2 | LF | CDBP | KDP | KWW | APMX | Coolant | Weight (kg) | Z | Insert quantity | Clamping bolt | fit bolts | Insert |
|--------------------------------|----|--------|-----|-------|-------|-----|------|-----|------|------|---------|-------------|---|-----------------|---------------|-----------|-------------|
| APE90S-050-Z04-A22R-AO12-L64-F | 50 | 46 | 22 | 18 | 11 | 90 | 74 | 6.5 | 10.4 | 64 | | 0.7 | 4 | 6 | 24 | SH100700 | AO.T 1204.. |
| APE90S-063-Z05-A27R-AO12-L74-F | 63 | 59 | 27 | 20 | 14 | 100 | 84 | 7.2 | 12.4 | 74 | | 1.4 | 5 | 7 | 35 | SH120800 | |
| APE90S-080-Z06-A32R-AO12-L85-F | 80 | 76 | 32 | 26 | 18 | 110 | 92 | 8.2 | 14.4 | 85 | | 2.8 | 6 | 8 | 48 | SH160900 | |

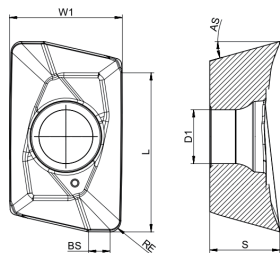
Note: with internal coolant
 without internal coolant

| Dimension(mm) | Accessory | | |
|---------------|-----------|---------|--------|
| Dia. Range | Screw | Wrench | Torque |
| Ø20-Ø80 | SP035086 | DT-TP10 | 3.5Nm |
| | | | |

Note: Clamping bolt included in packaging


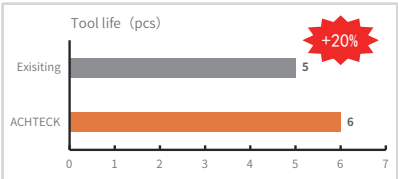
| Diagram | Clamping bolt | Specification | Torque |
|---------|---------------|---------------|--------|
| | SH100400 | M10 *40 | 81N-m |
| | SH120500 | M12 *50 | 142N-m |
| | SH160700 | M16 *70 | 350N-m |
| | SH100700 | M10 *70 | 81N-m |
| | SH120800 | M12 *80 | 142N-m |
| | SH160900 | M16 *90 | 350N-m |

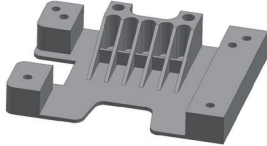
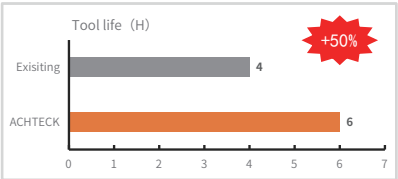
• ASM90/APE90/APE90S-AO12 Insert

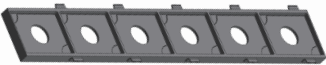
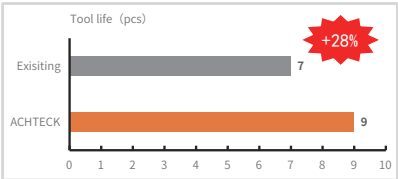



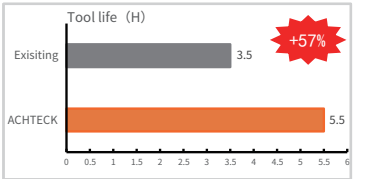
| Insert | Product code | Dimensions (mm) | | | | | | | Recommended cutting condition | | | | | | | |
|----------------|-------------------|-----------------|----|---|-----|-----|-----|-------|-------------------------------|--------|---------------------|--------|-----------------|--------|--------|--------|
| | | L | W1 | S | RE | BS | D1 | AS | Good condition ● | | General condition ◐ | | Bad condition ◑ | | | |
| | | | | | | | | | P | M | K | S | N | | | |
| | | | | | | | | | AP25IU | AP35IU | AP35IM | AP403M | AC301K | AP251K | AP403S | AW100K |
| | AOMT 120404ER-MM4 | 12.8 | 10 | 5 | 0.4 | 1.9 | 3.9 | 15.5° | ● | | ● | ● | | ● | ● | |
| | AOMT 120408ER-MM4 | 12.8 | 10 | 5 | 0.8 | 1.5 | 3.9 | 15.5° | ● | | ● | ● | | ● | ● | |
| | AOMT 120412ER-MM4 | 12.8 | 10 | 5 | 1.2 | 1.2 | 3.9 | 15.5° | ● | | ● | ● | | | ● | |
| | AOMT 120416ER-MM4 | 12.8 | 10 | 5 | 1.6 | 1.2 | 3.9 | 15.5° | | | ● | ● | | | ● | |
| | AOMT 120420ER-MM4 | 12.8 | 10 | 5 | 2.0 | 1.0 | 3.9 | 15.5° | ● | | ● | ● | | | ● | |
| | AOMT 120424ER-MM4 | 12.8 | 10 | 5 | 2.4 | 0.9 | 3.9 | 15.5° | ● | | ● | ● | | | ● | |
| | AOMT 120431ER-MM4 | 12.8 | 10 | 5 | 3.1 | 0.6 | 3.9 | 15.5° | ● | | ● | ● | | | ● | |
| | AOMT 120440ER-MM4 | 12.8 | 10 | 5 | 4.0 | 0.8 | 3.9 | 15.5° | | | ● | ● | | | ● | |
| NEW | AOHT 120408ER-MM3 | 12.8 | 10 | 5 | 0.8 | 1.4 | 3.9 | 15.5° | ● | | ● | ● | | | ● | |
| | AOHT 120404ER-MM3 | 12.8 | 10 | 5 | 0.4 | 1.9 | 3.9 | 15.5° | ● | | ● | ● | | | ● | |
| | AOHT 120408ER-MM3 | 12.8 | 10 | 5 | 0.8 | 1.5 | 3.9 | 15.5° | ● | | ● | ● | | | ● | |
| NEW | AOHT 120408ER-FM2 | 12.8 | 10 | 5 | 0.8 | 1.5 | 3.9 | 15.5° | | | | | | | | ● |

Success story

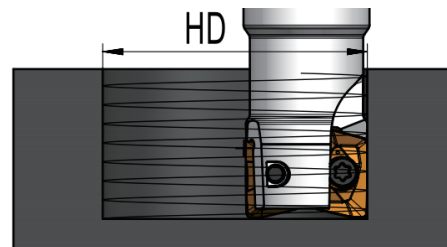
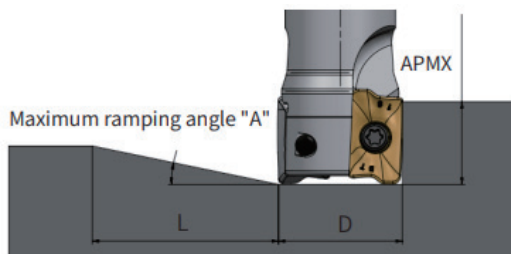
| | |
|-----------|---|
| Insert | AOMT 060204ER-MM3 AP403S |
| Cutter | ASM90-012-Z03-C12R-L120-C |
| Workpiece | Subplate  |
| Machining | Roughing |
| Material | TC4 |
| Vc | 75m/min |
| ap | 0.5mm |
| ae | 5mm |
| fz | 0.16mm/t |
| Coolant | Wet |
| Result |  |

| | |
|-----------|---|
| Insert | AOMT 10T331ER-MM4 AP403S |
| Cutter | ASM90-020-Z03-C20R-AO10-C |
| Workpiece | Aircraft structural part  |
| Machining | Roughing |
| Material | TC21 |
| Vc | 35m/min |
| ap | 1.0mm |
| ae | 3mm |
| fz | 0.16mm/t |
| Coolant | Wet |
| Result |  |

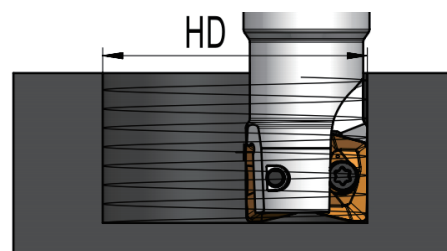
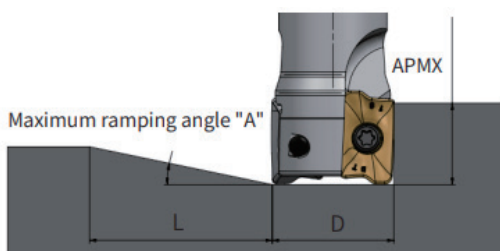
| | |
|-----------|---|
| Insert | AOMT 120431ER-MM4 AP403S |
| Cutter | ASM90-032-Z04-W32R-AO12-C |
| Workpiece | Aircraft structural part  |
| Machining | Pocket milling |
| Material | TC4 |
| Vc | 40m/min |
| ap | 3mm |
| ae | 15mm |
| fz | 0.08mm/t |
| Coolant | Wet |
| Result |  |

| | |
|-----------|--|
| Insert | AOMT 120408ER-MM4 AP403S |
| Cutter | APE90-063-Z05-A27R-AO12-L43-C |
| Workpiece | Rockshaft  |
| Machining | Surrounding roughing |
| Material | TC18 |
| Vc | 25m/min |
| ap | 40mm |
| ae | 5mm |
| fz | 0.2mm/t |
| Coolant | Wet |
| Result |  |

• **AO Series technical information**

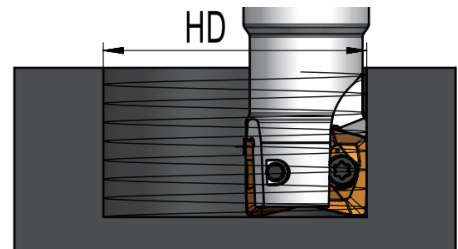
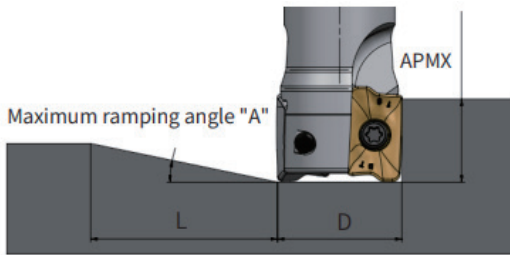


| Product Series | Cutter diameter (D) | Ramping | | | Helical Interpolate milling | | |
|----------------|---------------------|-------------------|-----------------------|-----------|-----------------------------|-----------------------------|---------------------------|
| | | Max Ramping angle | Minimum length-L (mm) | APMX (mm) | Minimum hole diameter HDmin | Maximum hole diameter HDmax | Maximum pitch (per round) |
| AO06 | 10 | 7.8° | 41.1 | 5.6 | 12.2 | - | 0.8 |
| | | | | | - | 20.0 | 3.6 |
| | 12 | 5.4° | 58.8 | 5.6 | 16.2 | - | 1.1 |
| | | | | | - | 24.0 | 3.0 |
| | 14 | 3.7° | 86.8 | 5.6 | 20.2 | - | 1.1 |
| | | | | | - | 28.0 | 2.4 |
| | 16 | 2.1° | 153.1 | 5.6 | 24.2 | - | 0.8 |
| | | | | | - | 32.0 | 1.6 |
| | 20 | 1.4° | 227.7 | 5.6 | 32.2 | - | 0.8 |
| | | | | | - | 40.0 | 1.3 |
| | 25 | 1.0° | 321.1 | 5.6 | 42.2 | - | 0.8 |
| | | | | | - | 50.0 | 1.2 |



| Product Series | Cutter diameter (D) | Ramping | | | Helical Interpolate milling | | |
|----------------|---------------------|-------------------|-----------------------|-----------|-----------------------------|-----------------------------|---------------------------|
| | | Max Ramping angle | Minimum length-L (mm) | APMX (mm) | Minimum hole diameter HDmin | Maximum hole diameter HDmax | Maximum pitch (per round) |
| AO10 | 16 | 13.0° | 39.0 | 9.0 | 18.6 | - | 1.6 |
| | | | | | - | 32.0 | 9.0 |
| | 20 | 5.2° | 99.0 | 9.0 | 26.6 | - | 1.6 |
| | | | | | - | 40.0 | 4.9 |
| | 25 | 2.5° | 208.0 | 9.0 | 36.6 | - | 1.3 |
| | | | | | - | 50.0 | 2.9 |
| | 32 | 1.5° | 334.8 | 9.0 | 50.6 | - | 1.3 |
| | | | | | - | 64.0 | 2.3 |
| | 40 | 1.1° | 478.8 | 9.0 | 66.6 | - | 1.3 |
| | | | | | - | 80.0 | 2.0 |

AO Series technical information



| Product Series | Cutter diameter (D) | Ramping | | | Helical Interpolate milling | | |
|----------------|---------------------|-------------------|-----------------------|-----------|-----------------------------|-----------------------------|---------------------------|
| | | Max Ramping angle | Minimum length-L (mm) | APMX (mm) | Minimum hole diameter HDmin | Maximum hole diameter HDmax | Maximum pitch (per round) |
| AO12 | 20 | 5.3 | 119.6 | 10 | 25 | - | 1.2 |
| | | | | | - | 40 | 4.9 |
| | 25 | 3.6 | 175.6 | 10 | 35 | - | 1.7 |
| | | | | | - | 50 | 4.2 |
| | 32 | 1.7 | 378.0 | 10 | 49 | - | 1.3 |
| | | | | | - | 64 | 2.5 |
| | 35 | 1.5 | 424.5 | 10 | 55 | - | 1.4 |
| | | | | | - | 70 | 2.4 |
| | 40 | 1.3 | 468.9 | 10 | 65 | - | 1.6 |
| | | | | | - | 80 | 2.5 |
| | 50 | 1.3 | 501.5 | 10 | 85 | - | 2.0 |
| | | | | | - | 100 | 2.9 |
| | 63 | 0.9 | 708.6 | 10 | 111 | - | 2.0 |
| | | | | | - | 126 | 2.6 |
| | 80 | 0.7 | 875.2 | 10 | 145 | - | 2.2 |
| | | | | | - | 160 | 2.7 |

ASM90-AO Series technical information

APE90/APE90S-AO12 notes for porcupine milling cutter insert installation:

1. APE90/APE90S-AO12 front part is compatible with All AO12 inserts.
2. APE90/APE90S-AO12 base part is compatible with the inserts with radius under 1.2.

