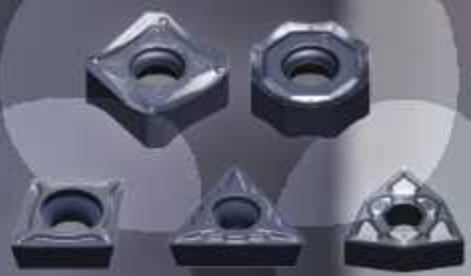
palbit
CUTTING TOOLS SOLUTIONS

PH7... Series

PVD coated grades for efficient milling & turning of steel, stainless steel, cast iron & HRSA

New PalTech Grades



NEW

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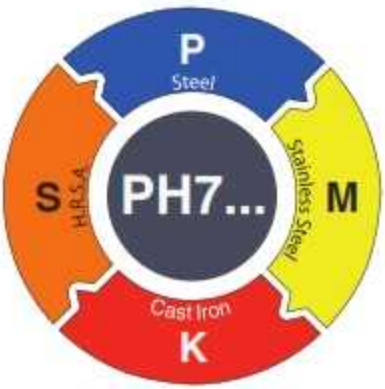
CUTTING TOOLS SOLUTIONS

New Milling Grades

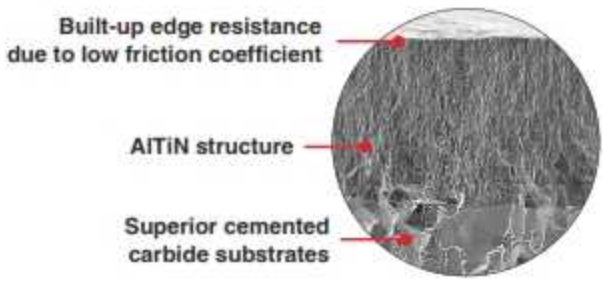
PH7... Series

New PVD coated grades for efficient milling of steel, stainless steel, cast iron & HRSA.

- **Longer tool life**
- **Higher cutting speeds**
- **Wide application range**



Superior coating layer **AlTiN** with high hardness and oxidation resistance at high temperature combined with special designed substrates ensures high wear resistance and longer tool life.



New PH7... series

Milling

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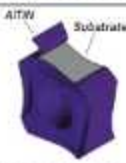
Grades Description

PH7910 *New*

(P05-P10)
(K05-K10)

A highly wear-resistant AlTiN PVD coated grade primarily for light machining and semi-finishing in steels and cast irons.

PH7920 *New*



(P10-P35) (K10-K30)
(M15-M25) (S10-S30)

Advanced AlTiN PVD coated carbide over a tough wear resistance submicro susbtrate for general puporse machining of steels and cast irons at high cutting speeds.

PH7930 *New*

(P20-P40) (K20-K40)
(M20-M35) (S25-S35)

AlTiN PVD coated carbide developed to provide better performance in general machining of steels, stainless steels and high-temp alloys.
Resistant to breakage and offer improved wear resistance and increased strength.

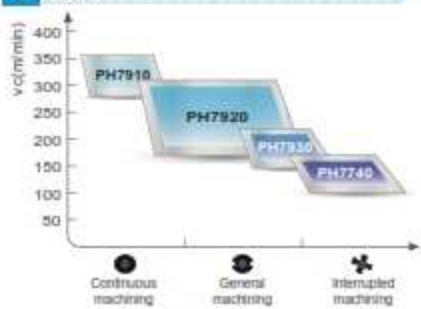
PH7740 *New*

(P30-P50) (K30-K40)
(M30-M50) (S30-S40)

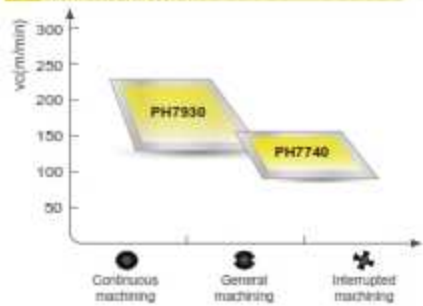
Very tough, general-purpose AlTiN PVD coated carbide grade for medium to heavy milling applications and on instable conditions.
Recommended for high-temp alloys, steels, stainless steels and cast irons. Can be used either wet or dry.

Milling Grades Line Up

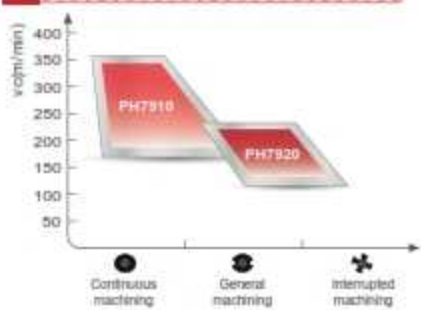
P Steel



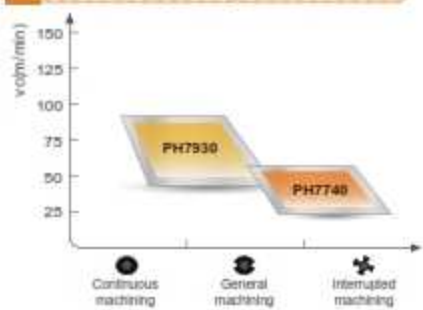
M Stainless steel



K Cast Iron (Alternative choice)



S Heat-resistant alloy



New PH7... series

Milling

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Case Studies

P Mould Steel (40CrMnNiMo8-6-4)

- **Tool**

ODc = 80 I 6 teeth's
Cutter: 080A06690-06-05-027050
Insert: SOEW 13M510 S PH7920

- **Cutting conditions**

Vc = 150 m/min (n = 597 min-1)
Fz = 1,7 mm/t (Vf = 6100mm/min)
Ap x Ae = 1,0 x 56 mm
Dry

Tool Overhang: L = 350 mm

- **Tool life result (min)**

+30% tool life

PH7920 90

Competitor 60

P Mould Steel (40CrMnNiMo8-6-4)

- **Tool**

ODc = 63 I 6 teeth's
Cutter: 063A90945-06-06-022040
Insert: SNHX 1206 ANEN-LP PH7920

- **Cutting conditions**

Vc = 180 m/min (n = 910 min-1)
Fz = 0,25 mm/t (Vf = 1365mm/min)
Ap x Ae = 2,0 x 47 mm
Dry

- **Tool life result (min)**

+30% tool life

PH7920 35

Competitor 24

M Stainless Steel (SUS 316-L)

- **Tool**

ODc = 12 I 2 teeth's
Cutter: 012E20090-02-04-012080
Insert: XPET 060210 ZER-HF PH7930

- **Cutting conditions**

Vc = 240 m/min (n = 6366 min-1)
Fz = 0,5 mm/t (Vf = 6366mm/min)
Ap x Ae = 0,3 x 8,4 mm
Dry

- **Tool life result (min)**

+20% tool life

PH7930 15

Competitor 12

M Stainless Steel (SUS 316-L)

- **Tool**

ODc = 63 I 6 teeth's
Cutter: 063A90945-06-06-022040
Insert: SNHX 1206 ANEN-LP PH7930

- **Cutting conditions**

Vc = 190 m/min (n = 960 min-1)
Fz = 0,25 mm/t (Vf = 1440mm/min)
Ap x Ae = 3,0 x 47 mm
Dry

- **Tool life result (min)**

+22% tool life

PH7930 45

Competitor 36

S Heat-resistant alloy (Ti 5Al-5Mo-5V-3Cr)

- **Tool**

ODc = 32 I 4 teeth's
Cutter: 032W06410-04-02-032150
Insert: SOET 080315-MS PH7740

- **Cutting conditions**

Vc = 35 m/min (n = 348 min-1)
Fz = 0,8 mm/t (Vf = 1113mm/min)
Ap x Ae = 0,5 x 22,4 mm
Wet

- **Tool life result (min)**

+20% tool life

PH7740 45

Competitor 35

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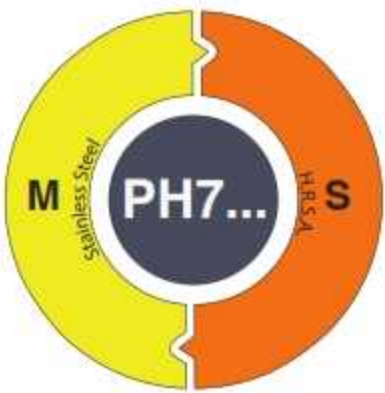
CUTTING TOOLS SOLUTIONS

New Turning Grades

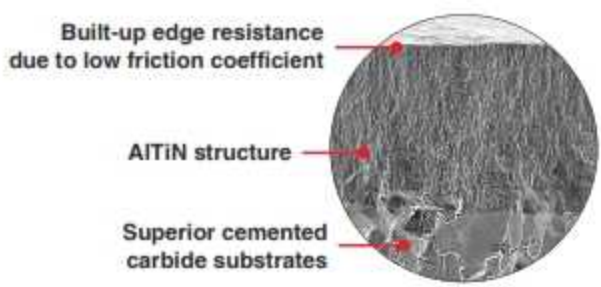
PH7... Series

New PVD coated grades for efficient turning of stainless steels and high resistant temperature alloys.

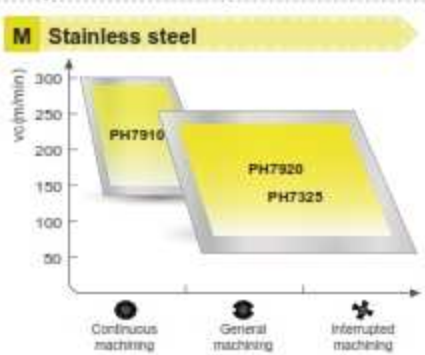
- **Longer tool life**
- **Higher cutting speeds**
- **Wide application range**

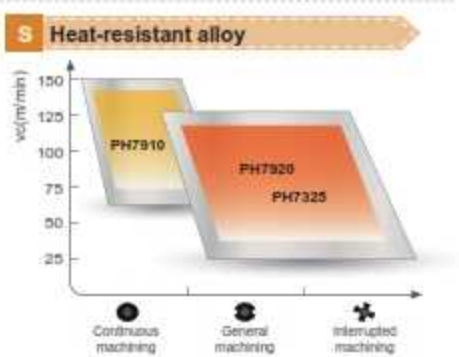


Superior coating layer **AlTiN** with high hardness and oxidation resistance at high temperature combined with special designed substrates ensures high wear resistance and longer tool life.



Turning Grades Line Up



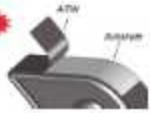


New PH7... series
Turning

palbit CUTTING TOOLS SOLUTIONS

Grades Description

PH7910 (M05-M10) (S05-S15)

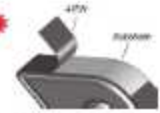


PVD (AlTiN) coated carbide grade with a very hard micro grain substrate improves wear resistance, heat dissipation and avoid built-up edge. High performance on "gummy" materials.
For light turning of stainless steels and HRSA.

PH7920 (M10-M25) (S10-S30)

A micro grain size combined with the AlTiN PVD coating make it suitable for roughing to finishing operations under good cutting conditions to light interrupted cutting at medium cutting speeds. Suitable for stainless steels & HRSA.

PH7325 (M10-M30) (S10-S30)



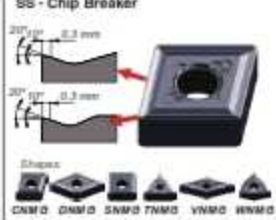
General grade for medium to finishing operations under good to medium cutting conditions. The substrate balance hardness and toughness. The combination with a wear resistant AlTiN PVD coating make it suitable to stainless steels and HRSA at medium cutting speeds.

Available Chip-Breakers

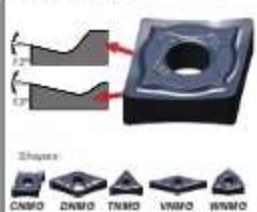
Negative

SF - Chip Breaker (New)

SS - Chip Breaker



MS - Chip Breaker



Positive

FM - Chip Breaker

MM - Chip Breaker

FS - Chip Breaker

New PH7... series
Turning

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Case Studies

M Stainless Steel (SUS 316-L)

- **Tool**
  Holder: DCLN L 2525 M12
  Insert: CNMG 120408-SF PH7920
- **Cutting conditions**
  Vc = 200 m/min
  Fn = 0,30 mm/r
  Ap = 1,5 mm
  Wet Cutting

- **Tool life result (min)**

PH7920 15
Competitor 12

+20% tool life

M Stainless Steel (SUS 304)

- **Tool**
  Holder: PCLN R 2525 M12
  Insert: CNMG 120408-SS PH7910
- **Cutting conditions**
  Vc = 230 m/min
  Fn = 0,30 mm/r
  Ap = 3,0 mm
  Wet Cutting

- **Tool life result (min)**

PH7910 15
Competitor 13

+15% tool life

M Stainless Steel (SUS 316)

- **Tool**
  Holder: SCLC R 2020 K09
  Insert: CCMT 09T304-FM PH7910
- **Cutting conditions**
  Vc = 300 m/min
  Fn = 0,15 mm/r
  Ap = 0,50 mm
  Wet Cutting

- **Tool life result (min)**

PH7910 15
Competitor 12

+20% tool life

S Heat-resistant alloy (Ti 5Al-5Mo-5V-3Cr)

- **Tool**
  Holder: DCLN L 2525 M12
  Insert: CNMG 120408-SF PH7910
- **Cutting conditions**
  Vc = 50 m/min
  Fn = 0,15 mm/r
  Ap = 1,25 mm
  Wet Cutting

- **Tool life result (min)**

PH7910 15
Competitor 13

+15% tool life

S Heat-resistant alloy (Inconel 718)

- **Tool**
  Holder: DCLN L 2525 M12
  Insert: CNMG 120408-SS PH7920
- **Cutting conditions**
  Vc = 60 m/min
  Fn = 0,20 mm/r
  Ap = 2,0 mm
  Wet Cutting

- **Tool life result (min)**

PH7920 15
Competitor 12

+20% tool life