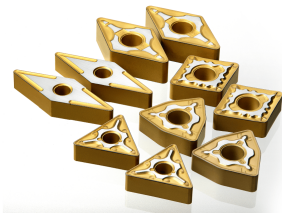


PRODUCT CATALOG

CARBIDE INSERTS

Indexable inserts for turning, milling, drilling, threading, parting and grooving — all standard ISO models and sizes, stocked from the world's leading manufacturers and ready for same-day dispatch.



TURNING

CNMG · TNMG



MILLING

APMT · SEKT



THREADING

16ER · 16IR

P. 04
TURNING

P. 05
MILLING

P. 06
DRILLING

P. 07
THREADING

P. 08
PARTING

THE WORLD'S LEADING INSERT MANUFACTURERS

Every insert in this catalog is available across our stocked brands. Specify the brand with your order, or let us match the most economical equivalent grade for your application.



+ SPECIAL ORDERS

Any brand or grade not listed,
sourced on request

GENUINE STOCK

All inserts supplied in original manufacturer packaging with grade certification.

CROSS-REFERENCING

We match equivalent grades across brands to protect your cost per edge.

AVAILABILITY

Standard models and sizes held in stock; specials on short lead times.

ISO WORKPIECE GROUPS

Every insert designation in this catalog carries the ISO colour code of the materials it cuts. Match your workpiece group first, then choose geometry and size.

P	STEEL	Unalloyed to high-alloyed steels, cast steel. The largest group — long-chipping, needs edge security and crater-wear resistance.
M	STAINLESS STEEL	Austenitic, ferritic and duplex stainless. Adhesive wear and built-up edge; sharp, tough PVD-coated grades.
K	CAST IRON	Grey, nodular and compacted graphite iron. Abrasive, short-chipping — hard CVD grades with Al_2O_3 .
N	NON-FERROUS	Aluminium, copper, brass, plastics. Sharp uncoated or PCD-tipped edges, polished rake faces.
S	SUPERALLOYS & TITANIUM	Heat-resistant alloys, Inconel, titanium. Low speeds, tough fine-grain substrates with PVD coats.
H	HARDENED STEEL	45–65 HRC hardened parts. CBN and coated carbide for hard turning in place of grinding.

COATING TECHNOLOGIES

COATING	LAYERS	BEST FOR
CVD	MT-TiCN + Al_2O_3 + TiN, 6–20 μm	Steel and cast iron turning at high speed; wear-resistant roughing grades
PVD	TiAlN / AlCrN, 2–5 μm	Stainless, superalloys, milling and sharp geometries; interrupted cuts
Cermet	TiCN-based substrate, coated or uncoated	Fine finishing of steels; excellent surface finish at light feeds
Uncoated	Fine-grain WC-Co	Aluminium and non-ferrous; sharpest edges, ground periphery
CBN / PCD	Brazed tip on carbide body	CBN: hardened steel (H). PCD: aluminium, composites at high volume

TURNING INSERTS

CNMG · TNMG · DNMG · WNMG · VNMG · SNMG



APPLICATIONS

-  General engineering & job shops
-  Automotive shafts & hubs
-  Oil & gas tube components
-  Power generation rotors
-  Repair & maintenance turning

Negative-rake double-sided inserts. CNMG (80°) is the roughing workhorse; TNMG gives six economical edges; DNMG and VNMG cover profiling and finishing; WNMG and SNMG take the heaviest cuts.

DESIGNATION	SHAPE	IC MM	S MM	RADII RE MM	ISO
CNMG 090308	Rhomb 80°	9.525	3.18	0.4/0.8	P M K
CNMG 120404/08/12	Rhomb 80°	12.70	4.76	0.4/0.8/1.2	P M K S
CNMG 160612/16	Rhomb 80°	15.875	6.35	1.2/1.6	P K
CNMG 190612/16	Rhomb 80°	19.05	6.35	1.2/1.6	P K
TNMG 110304/08	Triangle	6.35	3.18	0.4/0.8	P M K
TNMG 160404/08/12	Triangle	9.525	4.76	0.4/0.8/1.2	P M K
TNMG 220408/12/16	Triangle	12.70	4.76	0.8 / 1.2 / 1.6	P K
DNMG 110404/08	Rhomb 55°	9.525	4.76	0.4/0.8	P M S
DNMG 150604/08/12	Rhomb 55°	12.70	6.35	0.4/0.8/1.2	P M K S
WNMG 060404/08	Trigon 80°	9.525	4.76	0.4/0.8	P M K
WNMG 080404/08/12	Trigon 80°	12.70	4.76	0.4/0.8/1.2	P M K
VNMG 160404/08	Rhomb 35°	9.525	4.76	0.4/0.8	P M S
SNMG 120404/08/12	Square	12.70	4.76	0.4/0.8/1.2	P K
SNMG 190612/16	Square	19.05	6.35	1.2/1.6	P K

IC = inscribed circle · S = thickness · re = corner radii · chipbreakers per stock brand.

READING THE ISO DESIGNATION

Example: CNMG 120408

C	N	M	G	12	04	08
SHAPE 80° RHOMBIC	CLEARANCE 0°	TOLERANCE ±0.13	HOLE + CHIPBREAKER	EDGE LENGTH 12.7 MM	THICKNESS 4.76 MM	NOSE RADIUS 0.8 MM

CHIPBREAKER CHOICE

F-type for finishing, M-type for medium, R-type for roughing and interrupted cuts.

WIPER INSERTS

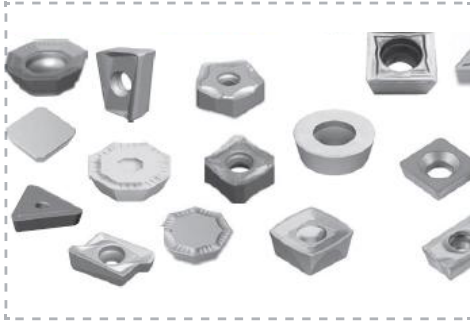
-WM / -WF wiper geometries double the feed at the same finish on straight cuts.

RULE OF THUMB

Depth of cut ≥ nose radius; feed ≈ half the nose radius for stable chips.

MILLING INSERTS

APMT · APKT · SEKT · RPMT · SNMX



APPLICATIONS

-  Die & mould roughing
-  Machine building, frames & beds
-  Aerospace structural parts
-  Automotive blocks & heads
-  Fabrication & weld cleanup



Positive-rake milling inserts for shoulder, face and copy milling. APMT/APKT parallelogram inserts give true 90° shoulders; SEKT squares are the standard for economical face milling; round RPMT inserts excel in profiling and die-mould roughing; SNMX doubles edge count on heavy face-milling cutters.

DESIGNATION	TYPE	EDGE/Ø MM	S MM	NOTES
APMT 1135 PDER	Parallelogram	11.0	3.5	2-edge; 10–32 mm
APMT 1604 PDER	Parallelogram	16.6	4.5	2-edge; 25–63 mm
APKT 100308	Parallelogram	10.0	3.18	Sharp; small cutters
APKT 160408	Parallelogram	16.0	4.76	Shoulder milling
SEKT 1204 AFTN	Square 45°	12.7	4.76	4-edge face milling
RPMT 08T2	Round	8.0	2.38	Die & mould
RPMT 10T3	Round	10.0	3.97	Copy milling
RPMT 1204	Round	12.0	4.76	Heavy profiling
SNMX 1206 ANN	Square 2-sided	12.7	6.35	8-edge face milling
SPMG 060204 HF	Square	6.35	2.38	Small high-feed
SDMT 1205	High-feed	12.7	5.0	Fast-feed roughing

READING THE ISO DESIGNATION

Example: APMT 1135 PDER

A	P	M	T	11	35	PDER
SHAPE 85° PARALLELOGRAM	CLEARANCE 11°	TOLERANCE ±0.13	SCREW HOLE, CHIPBREAKER	EDGE LENGTH 11 MM	THICKNESS 3.5 MM	GEOMETRY, RIGHT HAND

MOUNTING

Renew insert screws regularly and torque to spec — a stretched screw is the top cause of insert breakage.

CLIMB MILLING

Feed with the cutter rotation wherever the machine allows; halves flank wear on coated grades.

RAMPING

APMT and RPMT geometries permit helical ramping; check the body's max ramp angle.

DRILLING INSERTS

WCMX · SPMG



APPLICATIONS

-  Flange & plate hole-making
-  Valve bodies & manifolds
-  Automotive housings
-  Structural steel & energy



Inserts for indexable U-drills. WCMX trigon inserts run in the classic centre/periphery pairing for stable hole entry; SPMG squares suit modern high-feed drill bodies with four usable edges. Both fit drill bodies at 2xD to 5xD across all stocked brands.

DESIGNATION	EDGE MM	S MM	DRILL Ø RANGE
WCMX 030208	3.97	2.38	12.5 – 17.5 mm
WCMX 040208	4.76	2.38	17.5 – 23.0 mm
WCMX 050308	6.35	3.18	23.0 – 29.0 mm
WCMX 06T308	6.35	3.97	29.0 – 41.0 mm
WCMX 080412	7.94	4.76	41.0 – 60.0 mm
SPMG 050204	5.56	2.38	13.0 – 17.0 mm
SPMG 060204	6.35	2.38	17.0 – 21.5 mm
SPMG 07T308	7.94	3.97	21.5 – 26.0 mm
SPMG 090408	9.525	4.76	26.0 – 33.0 mm
SPMG 110408	11.11	4.76	33.0 – 41.5 mm
SPMG 140512	14.29	5.56	41.5 – 60.0 mm

WCMX: order centre + periphery grades per drill body. Grade recommendation on request per workpiece group.

READING THE ISO DESIGNATION

Example: WCMX 06T308

W	C	M	X	06	T3	08
TRIGON SHAPE	CLEARANCE 7°	TOLERANCE ±0.13	SPECIAL FEATURES	SIZE 6.35 MM	THICKNESS 3.97 MM	CORNER RADIUS 0.8 MM

CENTRE + PERIPHERY

Run a tough grade in the centre seat and a wear-resistant grade outside — order both per body.

COOLANT

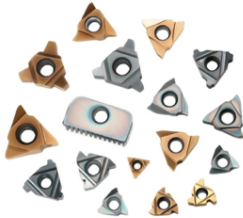
Through-tool coolant is mandatory above 2.5xD; check pressure ≥ 10 bar for deep holes.

HOLE ENTRY

Reduce feed 50% for the first 2 mm on inclined or convex surfaces.

THREADING INSERTS

16ER / 16IR · 11ER / 11IR · 22ER / 22IR



APPLICATIONS

-  Oil country tubular goods
-  Fasteners & lead screws
-  Hydraulic fittings
-  Valve & pump threads

Laydown inserts for external (ER) and internal (IR) thread turning. Size 16 covers the general range; 11 for small bores, 22 for coarse pitches. Full-profile inserts cut to gauge; partial-profile (AG) covers a pitch range with one edge.

DESIGNATION	PROFILE	PITCH RANGE	USE
16ER AG60	Partial 60°	0.5 – 3.0 mm	External metric/UN
16IR AG60	Partial 60°	0.5 – 3.0 mm	Internal metric/UN
16ER AG55	Partial 55°	14 – 48 TPI	External BSPT/Whit.
16IR AG55	Partial 55°	14 – 48 TPI	Internal BSPT/Whit.
16ER 1.0–3.0 ISO	Full profile	1.0/1.5/2.0/2.5/3.0	To-gauge metric, ext.
16IR 1.0–3.0 ISO	Full profile	1.0/1.5/2.0/2.5/3.0	To-gauge metric, int.
11ER/11IR A60	Partial 60°	0.5 – 1.5 mm	Small bores ≥ 11 mm
22ER/22IR N60	Partial 60°	3.5 – 6.0 mm	Coarse pitch, large Ø
16ER 11 NPT	Full profile	11.5 TPI	NPT pipe, sealing
16ER 14 NPT	Full profile	14 TPI	NPT pipe, sealing

Thread forms stocked: ISO metric, UN, Whitworth/BSPT, NPT, trapezoidal and ACME on request. External = ER, internal = IR; left-hand (EL/IL) available.

READING THE DESIGNATION

Example: 16ER AG60

16 INSERT SIZE 3/8"	E EXTERNAL	R RIGHT HAND	AG60 PARTIAL PROFILE 60°
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INFED METHOD

Modified flank infed (3–5° off the thread flank) gives the best chip control on CNC lathes.

PASSES

6–12 spring-loaded passes depending on pitch; final pass at 0.02–0.05 mm.

ANVILS

Match the anvil (shim) angle to the thread helix for equal flank clearance.

PARTING & GROOVING

MGMN · MRMN · GTN



APPLICATIONS

-  Bar-fed production turning
-  Bushings, rings & spacers
-  Circlip & O-ring grooves
-  Fittings part-off

Double-ended inserts for parting-off, external grooving and circlip grooves. MGMN neutral inserts cut flat-bottom grooves and part to centre; MRMN full-radius inserts form radiused grooves and profile turning; GTN self-gripping blades suit high-volume part-off on Swiss and fixed-head lathes.

DESIGNATION	WIDTH MM	EDGE FORM	MAX Ø PART-OFF
MGMN 150	1.5	Flat neutral	Ø 12 mm
MGMN 200	2.0	Flat neutral	Ø 20 mm
MGMN 250	2.5	Flat neutral	Ø 30 mm
MGMN 300	3.0	Flat neutral	Ø 40 mm
MGMN 400	4.0	Flat neutral	Ø 60 mm
MGMN 500	5.0	Flat neutral	Ø 80 mm
MGMN 600	6.0	Flat neutral	Ø 100 mm
MRMN 200	2.0	Full radius R1.0	Grooving only
MRMN 300	3.0	Full radius R1.5	Grooving only
MRMN 400	4.0	Full radius R2.0	Grooving only

Holders and blades (MGEHR/MGIVR, ZQ toolblocks) supplied to match. State groove depth and workpiece Ø for blade selection.

READING THE DESIGNATION

Example: MGMN 300-M

M	G	M	N	300	M
DOUBLE-ENDED	GROOVING	M-CLASS TOLERANCE	NEUTRAL (0°) EDGE	WIDTH 3.0 MM	MEDIUM CHIPBREAKER

OVERHANG RULE

Blade overhang max 8× insert width for parting; support close to the cut for grooving.

FEED AT CENTRE

Reduce feed 75% inside Ø 2 mm to avoid pip breakage and edge chipping.

COOLANT

High-pressure coolant directed into the groove doubles edge life in stainless.



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HOW TO ORDER

01

Quote the full ISO designation, e.g. CNMG 120408

02

State workpiece material or ISO group (P/M/K/N/S/H)

03

Preferred brand, or ask us to match the best-value grade

OUR BRANCHES

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