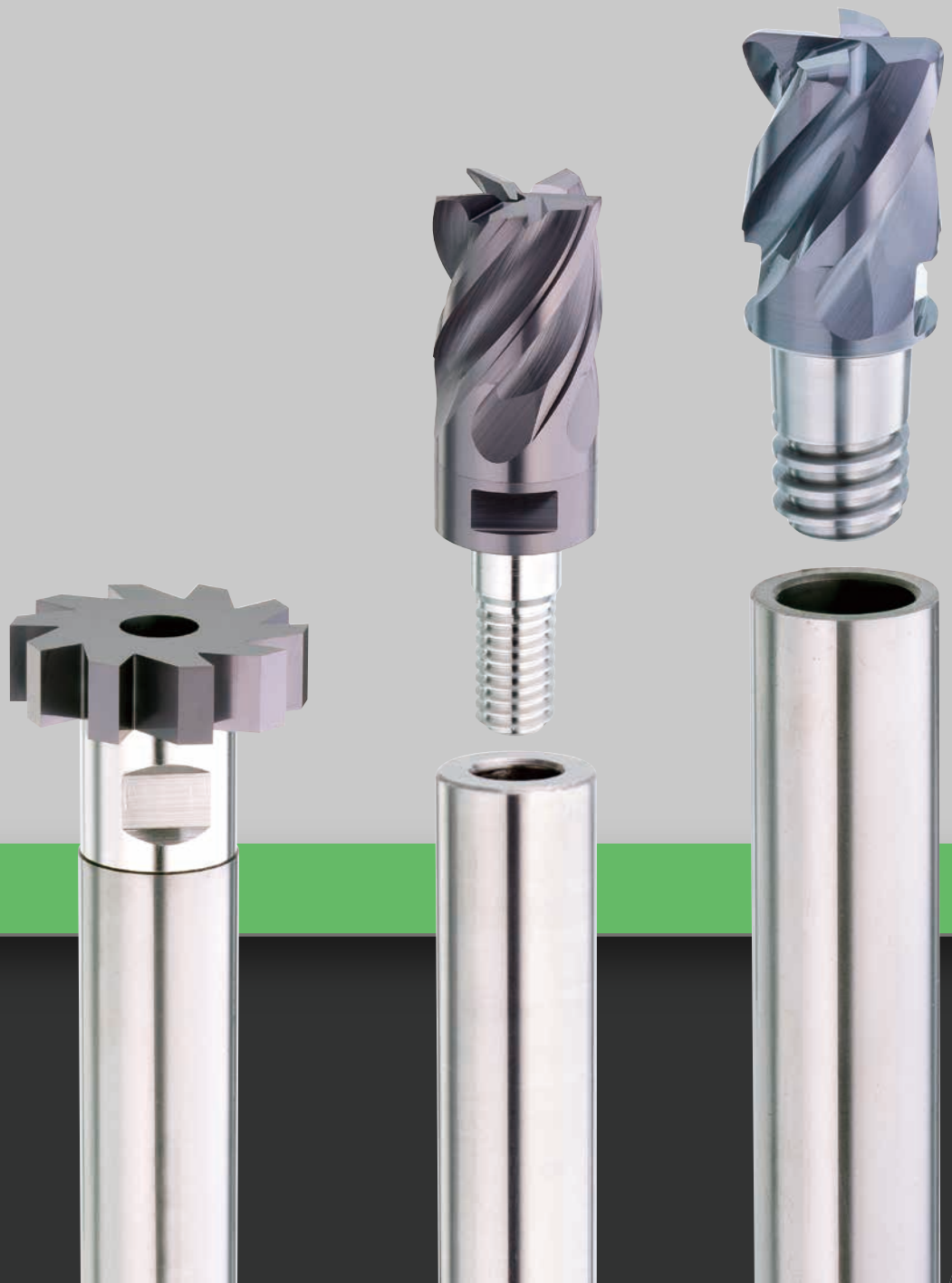


Interchangeable Series End Mills





Amid the global pursuit of sustainable development and carbon neutrality, the manufacturing industry is facing the dual challenges of reducing energy consumption and lowering carbon emissions.

As the core tools in metal processing, tungsten carbide cutting tools are also undergoing innovative transformations in line with ESG-driven energy-saving and carbon-reduction trends.

The production of tungsten carbide involves a significant carbon footprint. The IMP Interchangeable Multi-Purpose tooling system offers an effective solution to reducing carbon emissions: by replacing only the cutting head instead of scrapping the entire shank, it conserves tungsten carbide usage and substantially reduces carbon emissions during both manufacturing and disposal.

End users also benefit from cost-effective tooling while minimizing the downtime traditionally required for tool replacement during machining processes.

The IMP Interchangeable Multi-Purpose tooling system not only meets ESG and carbon-neutral policy requirements but also delivers long-term cost optimization and enhances brand competitiveness for enterprises.

It is a solution that combines high-efficiency machining with resource circularity, achieving a win-win of high-efficiency production and green manufacturing.



High-Efficiency Production & Green Manufacturing

Global Trend: Amid the global pursuit of sustainable development and carbon neutrality, the manufacturing industry is facing the dual challenges of reducing energy consumption and lowering carbon emissions.

The Challenge of Carbide: Tungsten carbide cutting tools, as the core of metal processing, are currently facing innovative transformations driven by ESG energy-saving and carbon-reduction trends.

The production process of tungsten carbide involves a significant carbon footprint.

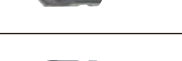
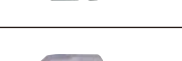
The Solution (IMP System): The IMP Multi-Purpose Interchangeable Tooling System is an effective method to solve carbon emission issues.

By replacing only the cutting head instead of scrapping the entire tool holder, it conserves tungsten carbide usage and substantially reduces carbon emissions during manufacturing and disposal.

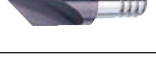
User Benefits: End users also benefit from high cost-performance tools and reduced downtime traditionally required for tool replacement during machining processes.

Conclusion: This system not only meets ESG and carbon-neutral policy requirements but also delivers long-term cost optimization and brand competitiveness. It is a win-win solution for "High-Efficiency Production" and "Green Manufacturing."

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	ISP..-B262TX			Interchangeable Ball Nose End Mills	3
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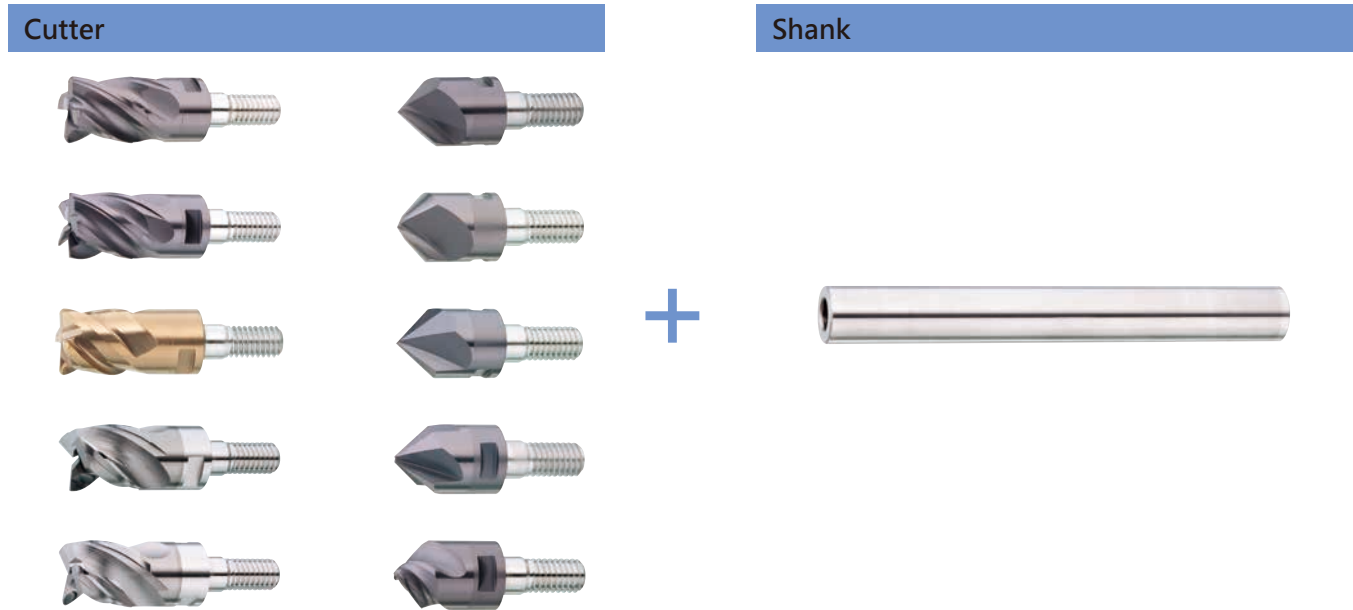
index

	Code No.	Appearance	Flute	Product Name	Page
IMP Interchangeable Multi-Purpose End Mills Cutter And Shank	APC20-IMP..			APC Modular Interchangeable Shanks (Straight Shank)	37
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ISP Series

Interchangeable Standard-Purpose End Mills Cutter And Shank

Tools Part



±0.01mm
Runout Tolerance

Code No.

◆ Cutter

ISP10 - E224 FX 1600 16 R05

①
Pair with Shank

②
Series

③
Coating

④
Dc
Example:
Dc 16mm → 1600
Dc 15.88mm → 1588

⑤
Lc
Example:
Lc 4mm → 04
Lc 10mm → 10

⑥
Edge
A Angle
R Corner Radius

◆ Shank

ISP10 S 10 070 000

①
Pair with Cutter

②
Type
S Straight
U Neck
A Conical Neck

③
d

④
L

⑤
L1

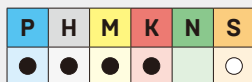
ISP.-E224FX

Interchangeable End Mills

4 Flute Center Cutting

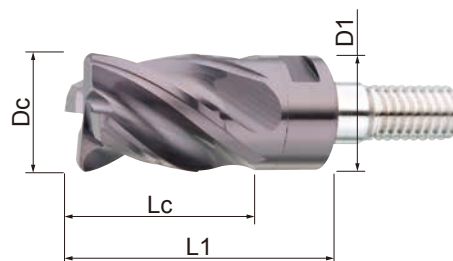
Features: Unequal helix angles and unequal indexing for maximum rigidity and vibration dampening.
 Design: Reinforced with a micro chamfer (C-angle) on the end teeth for edge protection.
 Application: Optimized for high-efficiency heavy-duty cutting and high-speed dynamic side roughing.
 For optimal performance across various machining conditions, use with APC high-precision anti-vibration tool holders.

Workpiece Materials: Steel, Stainless Steel, Titanium Alloys, Nickel-based Alloys, and Superalloys.



MG
Tipped
Carbide

AlCrN
FX



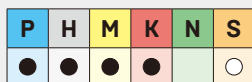
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ISP08-E224FX080008	8	8	17	7.7	4	●
ISP10-E224FX100010	10	10	22	9.7	4	●
ISP12-E224FX120012	12	12	25	11.7	4	●
ISP16-E224FX160016	16	16	30	15.5	4	●
ISP20-E224FX200020	20	20	38	19.5	4	●
ISP25-E224FX250025	25	25	42	24.5	4	●

ISP.-E225FX

Interchangeable End Mills

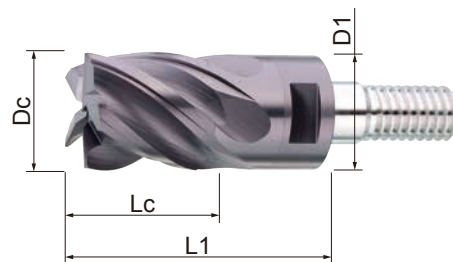
5 Flute Center Cutting

Features: Engineered with unequal indexing and high rigidity for superior vibration suppression.
 Design: Reinforced with a micro chamfer (C-angle) on the end teeth for enhanced edge protection.
 Application: Optimized for high-speed dynamic side roughing. Pair with APC high-precision anti-vibration tool holders to accommodate various machining conditions and strategies.
 Workpiece Materials: Suitable for steel, stainless steel, titanium alloys, nickel-based alloys, and superalloys.



MG
Tipped
Carbide

AlCrN
FX



Code No.	Dc mm 0 -0.03	Lc mm	L1 mm	D1 mm	Z	AlCrN FX
ISP08-E225FX080008	8	8	17	7.7	5	●
ISP10-E225FX100010	10	10	22	9.7	5	●
ISP12-E225FX120012	12	12	25	11.7	5	●
ISP16-E225FX160016	16	16	30	15.5	5	●
ISP20-E225FX200020	20	20	38	19.5	5	●
ISP25-E225FX250025	25	25	42	24.5	5	●

ISP.-E158TX

Interchangeable End Mills

4 Flute Center Cutting/ Long Series Center Cutting

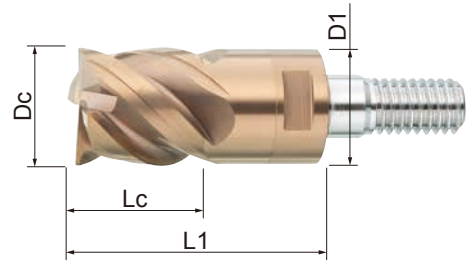
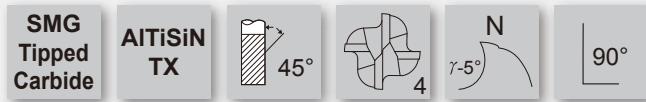
Materials: SMG ultra micro grain tungsten carbide with high-wear resistant TX coating.

Design: Negative rake angle for enhanced edge strength and chipping resistance.

Performance: Extended tool life.

Geometry: 45° high-efficiency helix angle for reduced cutting resistance.

Application: Finishing of high-hardness materials.



Code No.	Dc 0 -0.03	Lc mm	L1 mm	D1 mm	Z	AITiSiN TX
ISP08-E158TX080008	8	8	17	7.7	4	•
ISP10-E158TX100010	10	10	22	9.7	4	•
ISP12-E158TX120012	12	12	25	11.7	4	•
ISP16-E158TX160016	16	16	30	15.5	4	•
ISP20-E158TX200020	20	20	38	19.5	4	•
ISP25-E158TX250025	25	25	42	24.5	4	•

ISP.-B262TX

Interchangeable Ball Nose End Mills

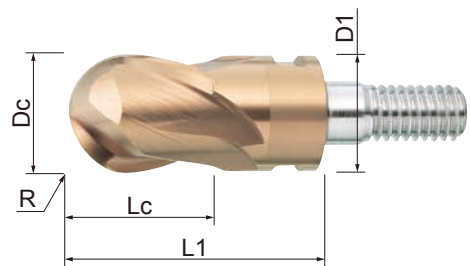
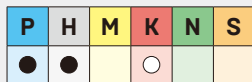
2-Flute Flute Center Cutting

Geometry: S-type ball nose geometry.

Precision: Precise ball radius (R) tolerance and extended tool life.

Application: High-hardness materials and high-precision mold machining.

Coating: Nano-multilayer coating for superior lubrication and wear resistance.



Code No.	Dc 0 -0.03	R ±0.01	Lc mm	L1 mm	D1 mm	Z	AITiSiN TX
ISP08-B262TX080006	8	4	6	15	7.7	2	•
ISP10-B262TX100007	10	5	7.5	19	9.7	2	•
ISP12-B262TX120009	12	6	9	22	11.7	2	•
ISP16-B262TX160012	16	8	12	26	15.5	2	•
ISP20-B262TX200015	20	10	15	33	19.5	2	•

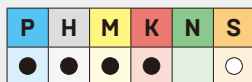
Interchangeable End Mills For Round Chamfering

4 Flute Center Cutting

Materials & Coating: SMG ultra micro grain tungsten carbide with nano-multilayer coating for superior lubrication and wear resistance.

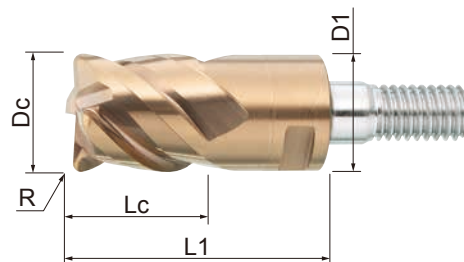
Design: High-rigidity increasing core and smooth end-face radius [R] chip flute.

Application: Extensive use in 3D contour roughing and finishing.



SMG
Tipped
Carbide

AlTiSiN
TX



Code No.	Dc 0 -0.03	R ±0.01	Lc mm	L1 mm	D1 mm	Z	AlTiSiN TX
ISP08-B286TX080008R05	8	0.5	8	17	7.7	4	●
ISP08-B286TX080008R10	8	1	8	17	7.7	4	●
ISP10-B286TX100010R05	10	0.5	10	22	9.7	4	●
ISP10-B286TX100010R10	10	1	10	22	9.7	4	●
ISP10-B286TX100010R20	10	2	10	22	9.7	4	●
ISP12-B286TX120012R05	12	0.5	12	25	11.7	4	●
ISP12-B286TX120012R10	12	1	12	25	11.7	4	●
ISP12-B286TX120012R20	12	2	12	25	11.7	4	●
ISP16-B286TX160016R05	16	0.5	16	30	15.5	4	●
ISP16-B286TX160016R10	16	1	16	30	15.5	4	●
ISP16-B286TX160016R20	16	2	16	30	15.5	4	●
ISP16-B286TX160016R30	16	3	16	30	15.5	4	●
ISP20-B286TX200020R05	20	0.5	20	38	19.5	4	●
ISP20-B286TX200020R10	20	1	20	38	19.5	4	●
ISP20-B286TX200020R20	20	2	20	38	19.5	4	●
ISP20-B286TX200020R30	20	3	20	38	19.5	4	●
ISP25-B286TX250020R10	25	1	25	42	24.5	4	●
ISP25-B286TX250020R20	25	2	25	42	24.5	4	●
ISP25-B286TX250020R30	25	3	25	42	24.5	4	●

ISP.-E143

Interchangeable End Mills For Aluminium

3 Flute Center Cutting for Aluminum Alloys

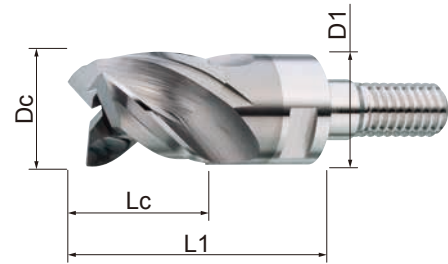
Design: Sharp cutting edges with high-removal rate (MRR) geometry and anti-sticking properties.

Precision: High-fineness precision-ground cutting edges.

Performance: Superior surface roughness after cutting.

Application: Roughing and finishing of various aluminum alloys.


MG
Tipped
Carbide

Uncoated
Bright


Code No.	Dc 0 -0.03	Lc mm	L1 mm	D1 mm	Z	Uncoated Bright
ISP08-E143080008	8	8	17	7.7	3	•
ISP10-E143100010	10	10	22	9.7	3	•
ISP12-E143120012	12	12	25	11.7	3	•
ISP16-E143160016	16	16	30	15.5	3	•
ISP20-E143200020	20	20	38	19.5	3	•
ISP25-E143250025	25	25	42	24.5	3	•

ISP.-E145

Interchangeable End Mills For Aluminium With Corner Radius

3 Flute Center Cutting for Aluminum Alloys

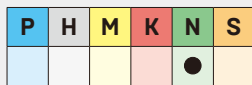
Design: Sharp cutting edges with high-removal rate (MRR) geometry and anti-sticking properties.

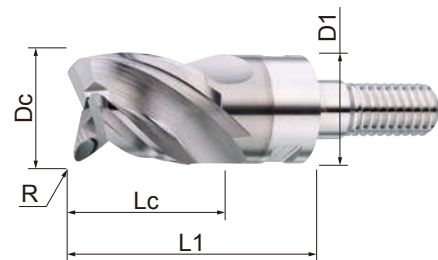
Precision: High-fineness precision-ground cutting edges.

Performance: Superior surface finish and roughness.

Durability: Corner radius (R) design to effectively extend tool life.

Application: Roughing and finishing of various aluminum alloys.


MG
Tipped
Carbide

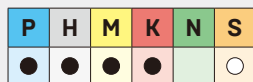
Uncoated
Bright


Code No.	Dc 0 -0.03	R ±0.01	Lc mm	L1 mm	D1 mm	Z	Uncoated Bright
ISP08-E145080008R10	8	1	8	17	7.7	3	•
ISP08-E145080008R20	8	2	8	17	7.7	3	•
ISP10-E145100010R10	10	1	10	22	9.7	3	•
ISP10-E145100010R20	10	2	10	22	9.7	3	•
ISP12-E145120012R10	12	1	12	25	11.7	3	•
ISP12-E145120012R20	12	2	12	25	11.7	3	•
ISP12-E145120012R30	12	3	12	25	11.7	3	•
ISP16-E145160016R10	16	1	16	30	15.5	3	•
ISP16-E145160016R20	16	2	16	30	15.5	3	•
ISP16-E145160016R30	16	3	16	30	15.5	3	•
ISP20-E145200020R10	20	1	20	38	19.5	3	•
ISP20-E145200020R20	20	2	20	38	19.5	3	•
ISP20-E145200020R30	20	3	20	38	19.5	3	•
ISP25-E145250025R10	25	1	25	42	24.5	3	•
ISP25-E145250025R20	25	2	25	42	24.5	3	•
ISP25-E145250025R30	25	3	25	42	24.5	3	•

ISP.-D903FX

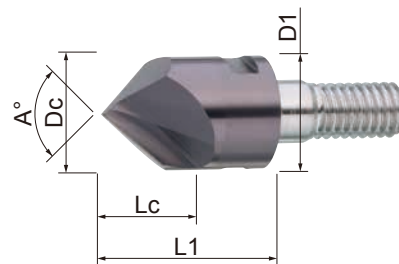
Interchangeable NC Spot Drills 90°

Strength: Enhanced tip strength suitable for various steels and cast irons up to 48HRC.
Application: Ideal for pre-drilling positioning and workpiece chamfering.



MG
Tipped
Carbide

AlCrN
FX



Code No.	Dc mm	Lc mm	L1 mm	D1 mm	A A°	Z	AlCrN FX
ISP08-D903FX080008A090	8	8	17	7.7	90	2	•
ISP10-D903FX100010A090	10	10	22	9.7	90	2	•
ISP12-D903FX120012A090	12	12	25	11.7	90	2	•
ISP16-D903FX160016A090	16	16	30	15.5	90	2	•
ISP20-D903FX200020A090	20	20	38	19.5	90	2	•

ISP.-D922FX

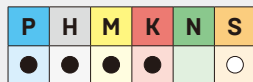
Interchangeable NC Spot Drills

NC Starting Drill 90°

Design: Dual point angle for high tip strength.

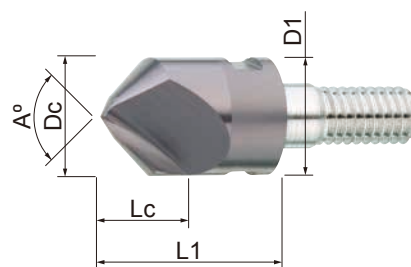
Coating: AlCrN coating for enhanced wear resistance and extended tool life.

Application: Positioning and spot drilling in various steel materials.



MG
Tipped
Carbide

AlCrN
FX



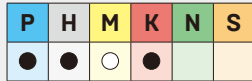
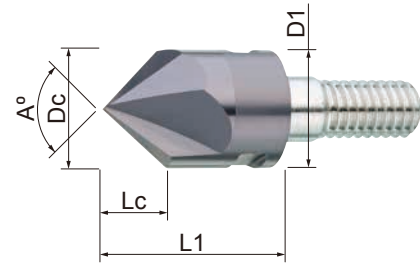
Code No.	Dc mm	Lc mm	L1 mm	D1 mm	A A°	Z	AlCrN FX
ISP08-D922FX080008A090	8	8	17	7.7	90	2	•
ISP10-D922FX100010A090	10	10	22	9.7	90	2	•
ISP12-D922FX120012A090	12	12	25	11.7	90	2	•
ISP16-D922FX160016A090	16	16	30	15.5	90	2	•
ISP20-D922FX200020A090	20	20	38	19.5	90	2	•

ISP.-E107FX

Interchangeable End Mills For Chamfering 90°

2 Flute Center Cutting

Application: Chamfering and contour milling.

MG
Tipped
CarbideAlCrN
FX

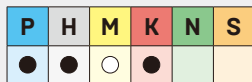
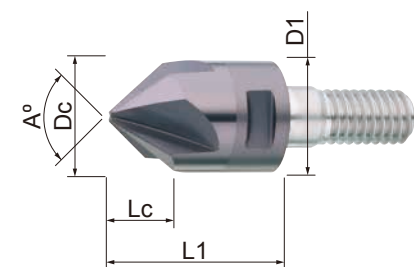
Code No.	Dc mm	Lc mm	L1 mm	D1 mm	A A°	Z	AlCrN FX
ISP08-E107FX080004A090	8	4	13	7.7	90	2	●
ISP10-E107FX100005A090	10	5	16	9.7	90	2	●
ISP12-E107FX120006A090	12	6	18	11.7	90	2	●
ISP16-E107FX160008A090	16	8	22	15.5	90	2	●
ISP20-E107FX200010A090	20	10	28	19.5	90	2	●
ISP25-E107FX250012A090	25	12.5	32	24.5	90	2	●

ISP.-E109FX

Interchangeable End Mills For Chamfering 90°

4 Flute Center Cutting

Application: Chamfering and contour milling.

MG
Tipped
CarbideAlCrN
FX

Code No.	Dc mm	Lc mm	L1 mm	D1 mm	A A°	Z	AlCrN FX
ISP08-E109FX080004A090	8	4	13	7.7	90	4	●
ISP10-E109FX100005A090	10	5	16	9.7	90	4	●
ISP12-E109FX120006A090	12	6	18	11.7	90	4	●
ISP16-E109FX160008A090	16	8	22	15.5	90	4	●
ISP20-E109FX200010A090	20	10	28	19.5	90	4	●
ISP25-E109FX250012A090	25	12.5	32	24.5	90	4	●

ISP.-E121FX

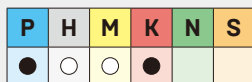
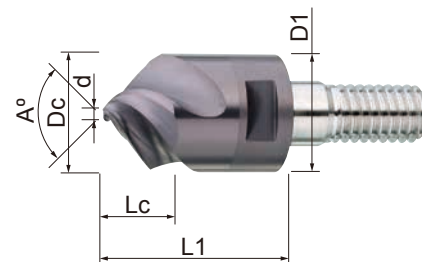
Interchangeable End Mills For Chamfering 90°

3 Flute Center Cutting

Design: Spiral cutting edge to reduce cutting resistance and vibration.

Performance: Sharp edges for superior surface finish and burr suppression.

Coating: AlCrN coating for extended tool life, enhanced machining efficiency, and optimal tool performance.

MG
Tipped
CarbideAlCrN
FX

Code No.	Dc mm	d mm	Lc mm	L1 mm	D1 mm	A A°	Z	AlCrN FX
ISP08-E121FX080003A090	8	0.8	3.6	13	7.7	90	3	•
ISP10-E121FX100004A090	10	1	4.5	16	9.7	90	3	•
ISP12-E121FX120005A090	12	1.2	5.4	18	11.7	90	3	•
ISP16-E121FX160006A090	16	1.6	7.2	22	15.5	90	3	•
ISP20-E121FX200007A090	20	2	9	28	19.5	90	3	•
ISP25-E121FX250009A090	25	2.5	9.37	32	24.5	90	3	•

ISP.-E151FX

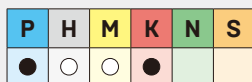
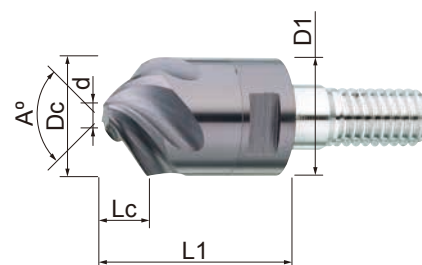
Interchangeable End Mills For Chamfering 90°

5 Flute Center Cutting

Design: Spiral cutting edge to reduce cutting resistance and vibration.

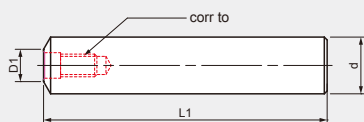
Performance: Sharp edges for superior surface finish and burr suppression.

Coating: AlCrN coating for extended tool life, enhanced machining efficiency, and optimal tool performance.

MG
Tipped
CarbideAlCrN
FX

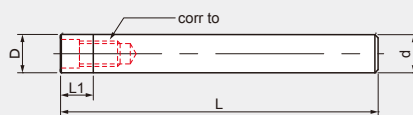
Code No.	Dc mm	d mm	Lc mm	L1 mm	D1 mm	A A°	Z	AlCrN FX
ISP08-E151FX080003A090	8	2	3	13	7.7	90	5	•
ISP10-E151FX100003A090	10	2.5	3.75	16	9.7	90	5	•
ISP12-E151FX120004A090	12	3	4.5	18	11.7	90	5	•
ISP16-E151FX160006A090	16	4	6	22	15.5	90	5	•
ISP20-E151FX200007A090	20	5	7.5	28	19.5	90	5	•
ISP25-E151FX250009A090	25	6.25	9.37	32	24.5	90	5	•

Interchangeable Standard-Purpose Alloy Steel Shanks



Code No.	D1 mm	L mm	d h6	Stock	corr. To	spanner
ISP08S10050000S	7.7	50	10	●	M5	
ISP10S12060000S	9.7	60	12	●	M5	
ISP12S16070000S	11.7	70	16	●	M6	
ISP16S20080000S	15.5	80	20	●	M8	
ISP20S25090000S	19.5	90	25	●	M10	
ISP25S25110000S	24.5	110	25	●	M12	

Interchangeable Standard-Purpose Alloy Steel Shanks

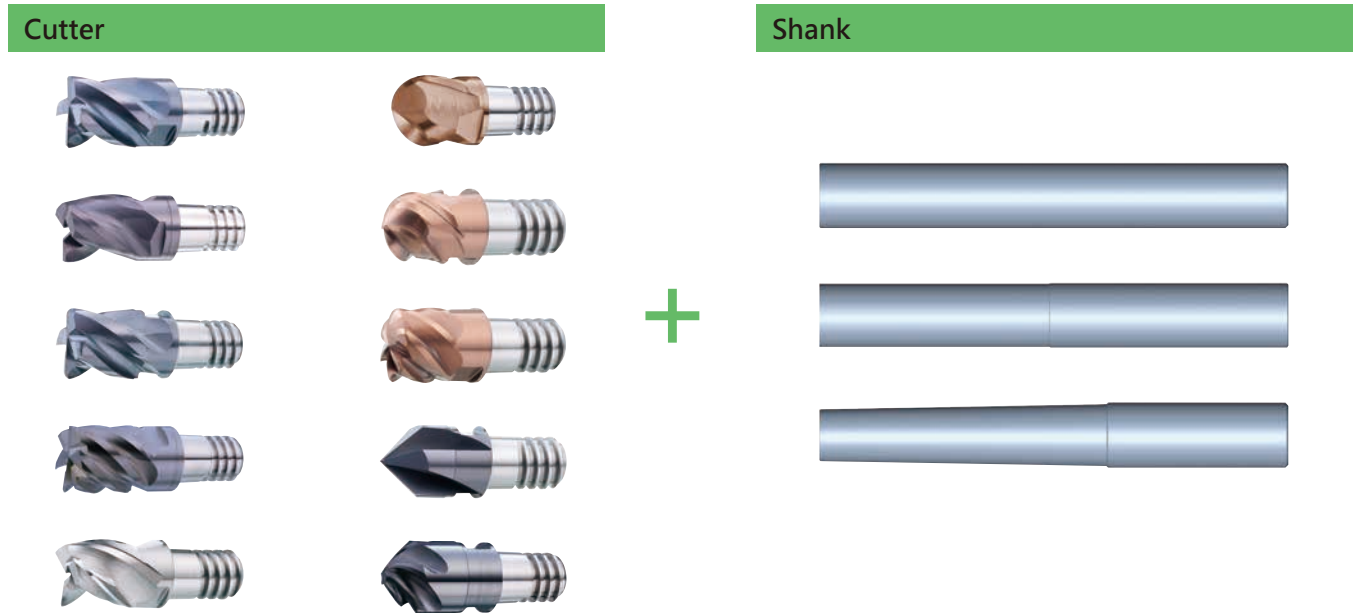


Code No.	D1 mm	L1 mm	L mm	d h6	Stock	corr. To	spanner
ISP08S08060000S	7.7	7	60	8	•	M5	
ISP10S10070000S	9.7	9	70	10	•	M5	
ISP12S12080000S	11.7	11	80	12	•	M6	
ISP16S16090000S	15.5	15	90	16	•	M8	
ISP20S20100000S	19.5	19	100	20	•	M10	

Note: Not suitable for heavy-duty cutting.

IMP Series Interchangeable Multi-Purpose End Mills Cutter And Shank

Tools Part



±0.01mm
Runout Tolerance

Code No.

◆ Cutter

IMP10

B252

FX

1600

16

R05

①

②

③

④

⑤

⑥

①
Pair with Shank

②
Series

③
Coating

④
Dc

Example:
Dc 16mm → 1600
Dc 15.88mm → 1588

⑤
Lc

Example:
Lc 4mm → 04
Lc 10mm → 10

⑥
Edge

A Angle
R Corner Radius

◆ Shank

IMP10

U

10

070

015

①

②

③

④

⑤

①
Pair with Cutter

②
Type

S Straight
U Neck
A Conical Neck

③
d

④
L

⑤
L1

IMP.-E130FX

Interchangeable Multipurpose End Mills

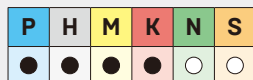
3 Flute Center Cutting

Design: Unequal helix and unequal indexing to effectively suppress vibration.

Performance: Large chip flutes for smooth chip evacuation across various materials.

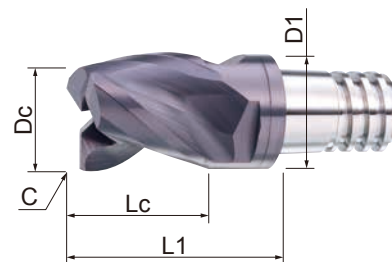
Coating: AlCrN nano-multilayer coating.

Application: Suitable for low-hardness carbon steel, alloy steel (including those with impurities), stainless steel, and anti-sticking materials.



MG
Solid
Carbide

AlCrN
FX



Code No.	Dc 0 -0.02	C mm	Lc mm	L1 mm	D1 mm	Z	AlCrN FX
IMP08-E130FX080008	8	0.2	8	12	7.7	3	●
IMP10-E130FX100010	10	0.25	10	16	9.7	3	●
IMP12-E130FX120012	12	0.3	12	19	11.7	3	●
IMP16-E130FX160016	16	0.4	16	24	15.5	3	●
IMP20-E130FX200020	20	0.5	20	30	19.5	3	●

IMP.-E140FX

Interchangeable Multipurpose End Mills

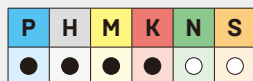
4 Flute Center Cutting

Design: Unequal helix and unequal indexing to effectively suppress vibration.

Performance: Large chip flutes for smooth chip evacuation across various materials.

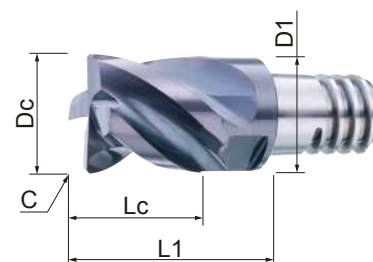
Coating: AlCrN nano-multilayer coating.

Application: Suitable for low-hardness carbon steel, alloy steel (including those with impurities), stainless steel, and anti-sticking materials.



MG
Solid
Carbide

AlCrN
FX



Code No.	Dc 0 -0.02	C mm	Lc mm	L1 mm	D1 mm	Z	AlCrN FX
IMP08-E140FX080008	8	0.2	8	12	7.7	4	●
IMP10-E140FX100010	10	0.25	10	16	9.7	4	●
IMP12-E140FX120012	12	0.3	12	19	11.7	4	●
IMP16-E140FX160016	16	0.4	16	24	15.5	4	●
IMP20-E140FX200020	20	0.5	20	30	19.5	4	●
IMP25-E140FX250025	25	0.6	25	37.5	24.5	4	●

IMP.-B252FX

Interchangeable Multipurpose End Mills With Corner Radius

4 Flute Center Cutting

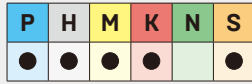
Design: Unequal helix and unequal indexing to effectively suppress vibration.

Performance: Large chip flutes for smooth chip evacuation across various materials.

Coating: Corner radius design with AlCrN nano-multilayer coating.

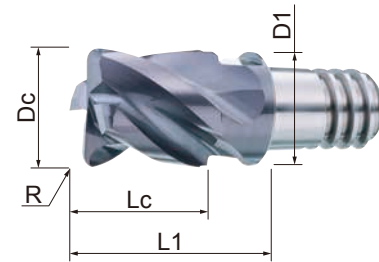
Workpiece Materials: Low-hardness carbon steel, alloy steel (including those with impurities), stainless steel, and sticky materials.

Application: Medium-duty and finishing across a wide range of materials.



MG
Solid
Carbide

AlCrN
FX



Code No.	Dc 0 -0.02	R ±0.01	Lc mm	L1 mm	D1 mm	Z	AlCrN FX
IMP08-B252FX080008R05	8	0.5	8	12	7.7	4	●
IMP08-B252FX080008R10	8	1	8	12	7.7	4	●
IMP10-B252FX100010R05	10	0.5	10	16	9.7	4	●
IMP10-B252FX100010R10	10	1	10	16	9.7	4	●
IMP10-B252FX100010R20	10	2	10	16	9.7	4	●
IMP12-B252FX120012R05	12	0.5	12	19	11.7	4	●
IMP12-B252FX120012R10	12	1	12	19	11.7	4	●
IMP12-B252FX120012R20	12	2	12	19	11.7	4	●
IMP16-B252FX160016R05	16	0.5	16	24	15.5	4	●
IMP16-B252FX160016R10	16	1	16	24	15.5	4	●
IMP16-B252FX160016R20	16	2	16	24	15.5	4	●
IMP16-B252FX160016R30	16	3	16	24	15.5	4	●
IMP20-B252FX200020R05	20	0.5	20	30	19.5	4	●
IMP20-B252FX200020R10	20	1	20	30	19.5	4	●
IMP20-B252FX200020R20	20	2	20	30	19.5	4	●
IMP20-B252FX200020R30	20	3	20	30	19.5	4	●
IMP25-B252FX250025R10	25	1	25	37.5	24.5	4	●
IMP25-B252FX250025R20	25	2	25	37.5	24.5	4	●
IMP25-B252FX250025R30	25	3	25	37.5	24.5	4	●

IMP.-E148FX

Interchangeable Multipurpose End Mills • Slim Shanks Type

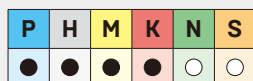
4 Flute Center Cutting

Design: Unequal helix and unequal indexing to effectively suppress vibration.

Performance: Large chip flutes for smooth chip evacuation across various materials.

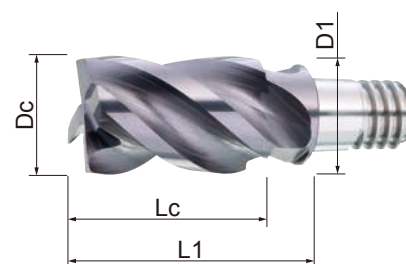
Coating: AlCrN nano-multilayer coating.

Application: Suitable for low-hardness carbon steel, alloy steel (including those with impurities), stainless steel, and anti-sticking materials.



MG
Solid
Carbide

AlCrN
FX



Code No.	Dc 0 -0.02	Lc mm	L1 mm	D1 mm	Z	AlCrN FX
IMP08-E148FX090013	9	13.5	17.5	7.7	4	○
IMP08-E148FX100015	10	15	19	7.7	4	○
IMP10-E148FX110016	11	16.5	22.5	9.7	4	○
IMP10-E148FX120018	12	18	24	9.7	4	○
IMP12-E148FX140019	13	19.5	26.5	11.7	4	○
IMP12-E148FX140021	14	21	28	11.7	4	○
IMP14-E148FX150022	15	22.5	29.5	13.7	4	○
IMP14-E148FX160024	16	24	31	13.7	4	○
IMP16-E148FX170022	17	22.5	30.5	15.5	4	○
IMP16-E148FX180027	18	27	35	15.5	4	○
IMP18-E148FX190028	19	28.5	36.5	17.5	4	○
IMP18-E148FX200030	20	30	38	17.5	4	○
IMP20-E148FX210031	21	31.5	41.5	19.5	4	○
IMP20-E148FX220033	22	33	43	19.5	4	○

※ ○ Non-stock item, pricing based on order quantity.

IMP.-E224FX

Interchangeable End Mills For Steel and Stainless Steel

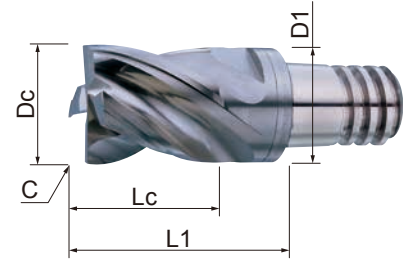
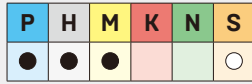
4 Flute Center Cutting

Features: Unequal helix, unequal indexing, high rigidity.

Design: Large chamfer [C-angle] protection on end teeth.

Application: High-efficiency heavy-duty cutting and high-speed dynamic side roughing. Use with APC high-precision anti-vibration tool holders for various machining conditions and strategies.

Workpiece Materials: Steel, stainless steel, titanium alloys, nickel-based alloys, and superalloys.



Code No.	Dc 0 -0.02	C mm	Lc mm	L1 mm	D1 mm	Z	AlCrN FX
IMP08-E224FX080008	8	0.2	8	12	7.7	4	●
IMP10-E224FX100010	10	0.25	10	16	9.7	4	●
IMP12-E224FX120012	12	0.3	12	19	11.7	4	●
IMP16-E224FX160016	16	0.4	16	24	15.5	4	●
IMP20-E224FX200020	20	0.5	20	30	19.5	4	●
IMP25-E224FX250025	25	0.6	25	37.5	24.5	4	●

IMP.-E224TX

Interchangeable End Mills For Steel and Stainless Steel

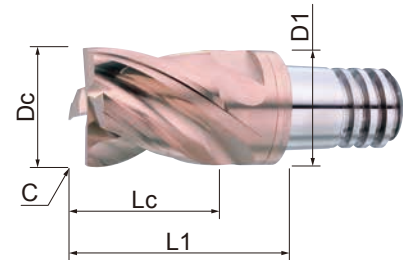
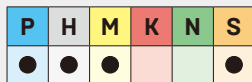
4 Flute Center Cutting

Features: Unequal helix, unequal indexing, high rigidity.

Design: Large chamfer [C-angle] protection on end teeth.

Application: High-efficiency heavy-duty cutting and high-speed dynamic side roughing. Use with APC high-precision anti-vibration tool holders for various machining conditions and strategies.

Workpiece Materials: Steel, stainless steel, titanium alloys, nickel-based alloys, and superalloys.



Code No.	Dc 0 -0.02	C mm	Lc mm	L1 mm	D1 mm	Z	AlTiSiN TX
IMP08-E224TX080008	8	0.2	8	12	7.7	4	●
IMP10-E224TX100010	10	0.25	10	16	9.7	4	●
IMP12-E224TX120012	12	0.3	12	19	11.7	4	●
IMP16-E224TX160016	16	0.4	16	24	15.5	4	●
IMP20-E224TX200020	20	0.5	20	30	19.5	4	●
IMP25-E224TX250025	25	0.6	25	37.5	24.5	4	●

IMP.-E225FX

Interchangeable End Mills For Steel and Stainless Steel

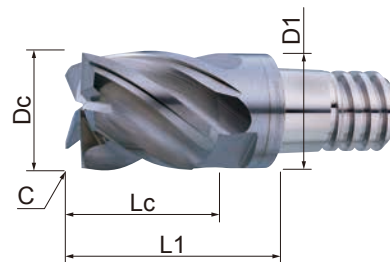
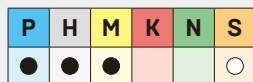
5 Flute Center Cutting

Features: Unequal indexing, high rigidity.

Design: Large chamfer (C-angle) protection on end teeth.

Application: High-speed dynamic side roughing. Use with APC high-precision anti-vibration tool holders for various machining conditions and strategies.

Workpiece Materials: Steel, stainless steel, titanium alloys, nickel-based alloys, and superalloys.



Code No.	Dc 0 -0.02	C mm	Lc mm	L1 mm	D1 mm	Z	AlCrN FX
IMP10-E225FX100010	10	0.25	10	16	9.7	5	●
IMP12-E225FX120012	12	0.3	12	19	11.7	5	●
IMP16-E225FX160016	16	0.4	16	24	15.5	5	●
IMP20-E225FX200020	20	0.5	20	30	19.5	5	●
IMP25-E225FX250025	25	0.6	25	37.5	24.5	5	●

IMP.-E225TX

Interchangeable End Mills For Steel and Stainless Steel

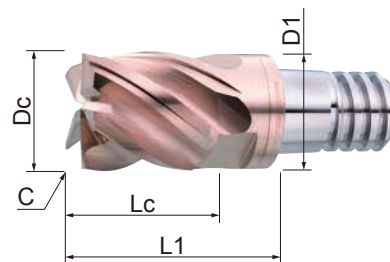
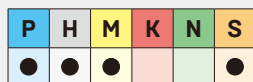
5 Flute Center Cutting

Features: Unequal indexing, high rigidity.

Design: Large chamfer (C-angle) protection on end teeth.

Application: High-speed dynamic side roughing. Use with APC high-precision anti-vibration tool holders for various machining conditions and strategies.

Workpiece Materials: Steel, stainless steel, titanium alloys, nickel-based alloys, and superalloys.



Code No.	Dc 0 -0.02	C mm	Lc mm	L1 mm	D1 mm	Z	AlTiSiN TX
IMP10-E225TX100010	10	0.25	10	16	9.7	5	●
IMP12-E225TX120012	12	0.3	12	19	11.7	5	●
IMP16-E225TX160016	16	0.4	16	24	15.5	5	●
IMP20-E225TX200020	20	0.5	20	30	19.5	5	●
IMP25-E225TX250025	25	0.6	25	37.5	24.5	5	●

IMP.-E226FX

Interchangeable End Mills

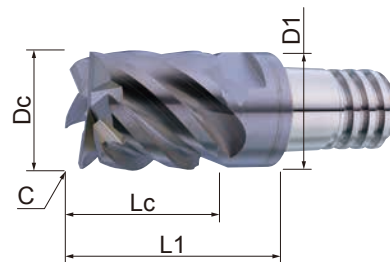
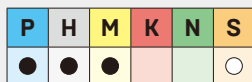
6 Flute Center Cutting

Features: Unequal indexing, high rigidity.

Design: Large chamfer (C-angle) protection on end teeth.

Application: High-speed dynamic side roughing. Use with APC high-precision anti-vibration tool holders for various machining conditions and strategies.

Workpiece Materials: Steel, stainless steel, titanium alloys, nickel-based alloys, and superalloys.



Code No.	Dc 0 -0.02	C mm	Lc mm	L1 mm	D1 mm	Z	AlCrN FX
IMP10-E226FX100010	10	0.25	10	16	9.7	6	•
IMP12-E226FX120012	12	0.3	12	19	11.7	6	•
IMP16-E226FX160016	16	0.4	16	24	15.5	6	•
IMP20-E226FX200020	20	0.5	20	30	19.5	6	•
IMP25-E226FX250025	25	0.6	25	37.5	24.5	6	•

IMP.-E226TX

Interchangeable End Mills

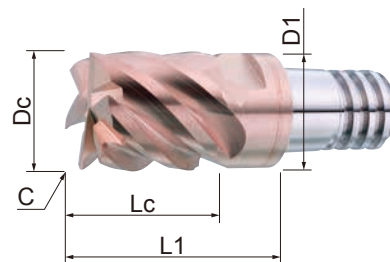
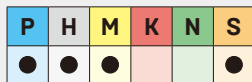
6 Flute Center Cutting

Features: Unequal indexing, high rigidity.

Design: Large chamfer (C-angle) protection on end teeth.

Application: High-speed dynamic side roughing. Use with APC high-precision anti-vibration tool holders for various machining conditions and strategies.

Workpiece Materials: Steel, stainless steel, titanium alloys, nickel-based alloys, and superalloys.



Code No.	Dc 0 -0.02	C mm	Lc mm	L1 mm	D1 mm	Z	AlTiSiN TX
IMP10-E226TX100010	10	0.25	10	16	9.7	6	•
IMP12-E226TX120012	12	0.3	12	19	11.7	6	•
IMP16-E226TX160016	16	0.4	16	24	15.5	6	•
IMP20-E226TX200020	20	0.5	20	30	19.5	6	•
IMP25-E226TX250025	25	0.6	25	37.5	24.5	6	•

IMP.-E228FX

Interchangeable End Mills

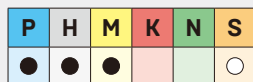
6 Flute Center Cutting

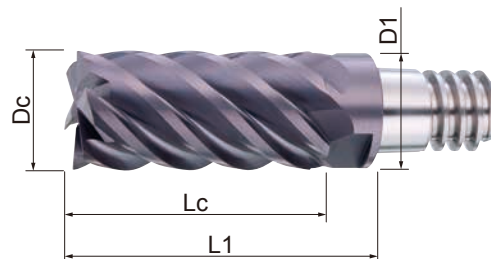
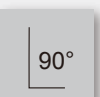
Features: Unequal indexing, high rigidity.

Design: Micro chamfer (C-angle) protection on end teeth.

Application: High-speed dynamic side roughing. Use with APC high-precision anti-vibration tool holders for various machining conditions and strategies.

Workpiece Materials: Steel, stainless steel, titanium alloys, nickel-based alloys, and superalloys.


MG
Solid
Carbide

AlCrN
FX


Code No.	Dc 0 -0.02	Lc mm	L1 mm	D1 mm	Z	AlCrN FX
IMP10-E228FX100020	10	20	26	9.7	6	●
IMP12-E228FX120024	12	24	31	11.7	6	●
IMP16-E228FX160032	16	32	40	15.5	6	●
IMP20-E228FX200040	20	40	50	19.5	6	●
IMP25-E228FX250050	25	50	62.5	24.5	6	●

IMP.-B220FX

Interchangeable Ball Nose End Mills For Steel and Difficult To Cut Materials

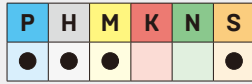
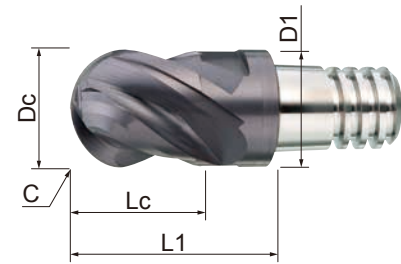
4 Flute Center Cutting

Features: High rigidity, unequal indexing.

Design: Sharp cutting edges with honed/passivated edge protection.

Application: Use with APC high-precision anti-vibration tool holders.

Workpiece Materials: Carbon steel, stainless steel, titanium alloys, nickel-based alloys, and superalloys.

MG
Solid
CarbideAlCrN
FX

Code No.	Dc 0 -0.02	R ±0.01	Lc mm	L1 mm	D1 mm	Z	AlCrN FX
IMP08-B220FX080008	8	4	6	10	7.7	4	•
IMP10-B220FX100007	10	5	7.5	19	9.7	4	•
IMP12-B220FX120009	12	6	9	22	11.7	4	•
IMP16-B220FX160012	16	8	12	26	15.5	4	•
IMP20-B220FX200015	20	10	15	33	19.5	4	•

IMP.-E143

Interchangeable End Mills For Aluminium

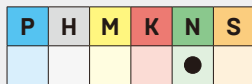
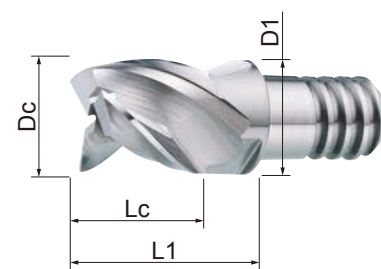
3 Flute Center Cutting for Aluminum Alloys

Design: Sharp cutting edges with high material removal rate (MRR) geometry and superior anti-sticking properties.

Precision: High-fineness precision-ground cutting edges.

Performance: Excellent surface roughness after machining.

Application: Roughing and finishing of various aluminum alloys.

MG
Tipped
CarbideUncoated
Bright

Code No.	Dc 0 -0.02	Lc mm	L1 mm	D1 mm	Z	Uncoated Bright
IMP08-E143080012	8	12	16	7.7	3	•
IMP10-E143100015	10	15	21	9.7	3	•
IMP12-E143120018	12	18	25	11.7	3	•
IMP16-E143160024	16	24	32	15.5	3	•
IMP20-E143200030	20	30	40	19.5	3	•
IMP25-E143250037	25	37.5	50	24.5	3	•

Interchangeable End Mills For Aluminium With Corner Radius

3 Flute Center Cutting For Aluminium With Corner Radius

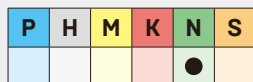
Design: Sharp cutting edges with high material removal rate (MRR) geometry and superior anti-sticking properties.

Precision: High-fineness precision-ground cutting edges.

Performance: Excellent surface finish and roughness.

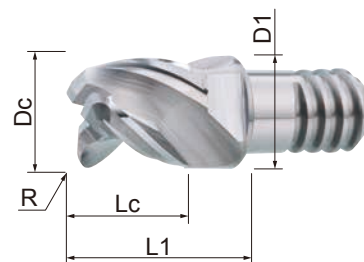
Durability: Corner radius (R) design to effectively extend tool life.

Application: Roughing and finishing of various aluminum alloys.



MG
Tipped
Carbide

Uncoated
Bright



Code No.	Dc 0 -0.02	R ±0.01	Lc mm	L1 mm	D1 mm	Z	Uncoated Bright
IMP08-E145080012R10	8	1	12	16	7.7	3	•
IMP08-E145080012R20	8	2	12	16	7.7	3	•
IMP10-E145100015R10	10	1	15	21	9.7	3	•
IMP10-E145100015R20	10	2	15	21	9.7	3	•
IMP12-E145120018R10	12	1	18	25	11.7	3	•
IMP12-E145120018R20	12	2	18	25	11.7	3	•
IMP12-E145120018R30	12	3	18	25	11.7	3	•
IMP16-E145160024R10	16	1	24	32	15.5	3	•
IMP16-E145160024R20	16	2	24	32	15.5	3	•
IMP16-E145160024R30	16	3	24	32	15.5	3	•
IMP20-E145200030R10	20	1	30	40	19.5	3	•
IMP20-E145200030R20	20	2	30	40	19.5	3	•
IMP20-E145200030R30	20	3	30	40	19.5	3	•
IMP25-E145250037R10	25	1	37.5	50	24.5	3	•
IMP25-E145250037R20	25	2	37.5	50	24.5	3	•
IMP25-E145250037R30	25	3	37.5	50	24.5	3	•

IMP.-E158TX

Interchangeable End Mills

4 Flute Center Cutting

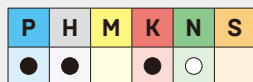
Materials & Coating: SMG ultra-micro grain tungsten carbide with high-wear resistant TX coating.

Design: Negative rake angle for superior edge strength and chipping resistance.

Performance: Extended tool life.

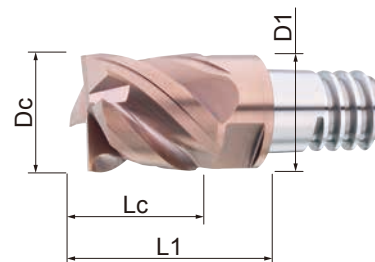
Geometry: 45° high-efficiency helix angle to effectively reduce cutting resistance.

Application: Precision finishing of high-hardness materials.



SMG
Solid
Carbide

AlTiSiN
TX



Code No.	Dc 0 -0.02	Lc mm	L1 mm	D1 mm	Z	AlTiSiN TX
IMP08-E158TX080008	8	8	12	7.7	4	●
IMP10-E158TX100010	10	10	16	9.7	4	●
IMP12-E158TX120012	12	12	19	11.7	4	●
IMP16-E158TX160016	16	16	24	15.5	4	●
IMP20-E158TX200020	20	20	30	19.5	4	●
IMP25-E158TX250025	25	25	37.5	24.5	4	●

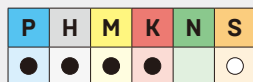
Interchangeable End Mills For Round Chamfering

4 Flute Center Cutting

Materials & Coating: SMG ultra micro grain tungsten carbide with nano-multilayer coating for superior lubrication and wear resistance.

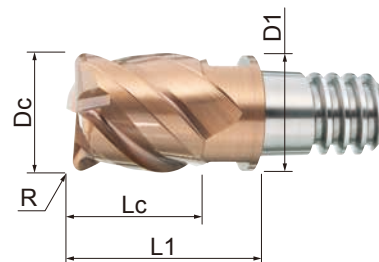
Design: High-rigidity increasing core and smooth end-face radius [R] chip flute.

Application: Extensive use in 3D contour roughing and finishing.



SMG
Solid
Carbide

AlTiSiN
TX



Code No.	Dc 0 -0.02	R ±0.01	Lc mm	L1 mm	D1 mm	Z	AlTiSiN TX
IMP08-B286TX080008R05	8	0.5	8	12	7.7	4	●
IMP08-B286TX080008R10	8	1	8	12	7.7	4	●
IMP10-B286TX100010R05	10	0.5	10	16	9.7	4	●
IMP10-B286TX100010R10	10	1	10	16	9.7	4	●
IMP10-B286TX100010R20	10	2	10	16	9.7	4	●
IMP12-B286TX120012R05	12	0.5	12	19	11.7	4	●
IMP12-B286TX120012R10	12	1	12	19	11.7	4	●
IMP12-B286TX120012R20	12	2	12	19	11.7	4	●
IMP16-B286TX160016R05	16	0.5	16	24	15.5	4	●
IMP16-B286TX160016R10	16	1	16	24	15.5	4	●
IMP16-B286TX160016R20	16	2	16	24	15.5	4	●
IMP16-B286TX160016R30	16	3	16	24	15.5	4	●
IMP20-B286TX200020R05	20	0.5	20	30	19.5	4	●
IMP20-B286TX200020R10	20	1	20	30	19.5	4	●
IMP20-B286TX200020R20	20	2	20	30	19.5	4	●
IMP20-B286TX200020R30	20	3	20	30	19.5	4	●
IMP25-B286TX250025R10	25	1	25	37.5	24.5	4	●
IMP25-B286TX250025R20	25	2	25	37.5	24.5	4	●
IMP25-B286TX250025R30	25	3	25	37.5	24.5	4	●

IMP.-B262TX

Interchangeable Ball Nose End Mills

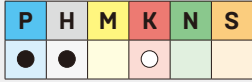
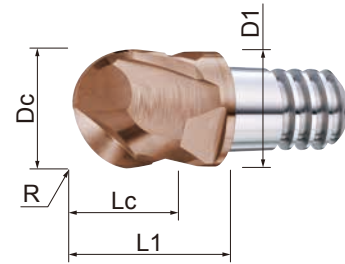
2 Flute Center Cutting

Geometry: S-type ball nose geometry.

Precision: Precise ball radius (R) tolerance and extended tool life.

Application: High-hardness materials and high-precision mold machining.

Coating: Nano-multilayer coating for superior lubrication and wear resistance.

SMG
Solid
CarbideAlTiSiN
TX

Code No.	Dc 0 -0.02	R ±0.01	Lc mm	L1 mm	D1 mm	Z	AlTiSiN TX
IMP08-B262TX080006	8	4	6	10	7.7	2	●
IMP10-B262TX100007	10	5	7.5	13.5	9.7	3	●
IMP12-B262TX120009	12	6	9	16	11.7	3	●
IMP16-B262TX160012	16	8	12	20	15.5	3	●
IMP20-B262TX200015	20	10	15	25	19.5	3	●

IMP.-B254TX

Interchangeable Ball Nose End Mills

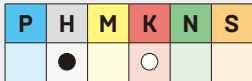
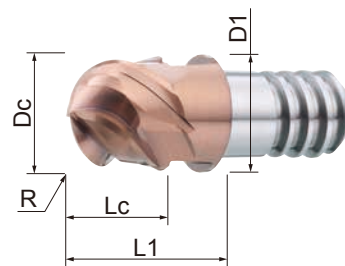
4 Flute Center Cutting

Geometry: S-type ball nose geometry.

Precision: Precise ball radius (R) tolerance and extended tool life.

Application: High-hardness materials and high-precision mold machining.

Coating: Nano-multilayer coating for superior lubrication and wear resistance.

SMG
Solid
CarbideAlTiSiN
TX

Code No.	Dc 0 -0.02	R ±0.01	Lc mm	L1 mm	D1 mm	Z	AlTiSiN TX
IMP08-B254TX080006	8	4	6	10	7.7	4	●
IMP10-B254TX100007	10	5	7.5	13.5	9.7	4	●
IMP12-B254TX120009	12	6	9	16	11.7	4	●
IMP16-B254TX160012	16	8	12	20	15.5	4	●
IMP20-B254TX200015	20	10	15	25	19.5	4	●

IMP.-F678TX

Interchangeable High Feed End Mills

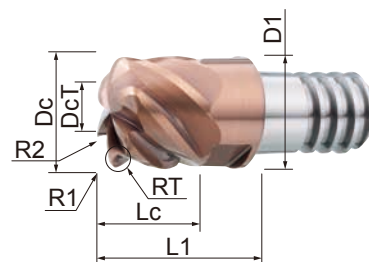
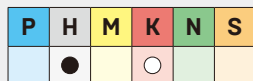
6 Flute High-Feed End Mill

Geometry: Special R-curve geometry for efficient rough machining of 3D curved contours.

Performance: Excellent lubrication and wear resistance.

Application: High-speed cutting of low- to medium-hardness steel materials.

Coating: Nano-multilayer coating for superior lubrication and wear resistance.



Code No.	Dc 0 -0.02	RT mm	DcT mm	R1 mm	R2 mm	Lc mm	L1 mm	D1 mm	Z	AITiSiN TX
IMP12-F678TX120009R15	12	1.5	6	1.2	7	9	16	11.7	6	•
IMP16-F678TX160012R20	16	2	8	1.6	9.5	12	20	15.5	6	•
IMP20-F678TX200015R25	20	2.5	10	2	12	15	25	19.5	6	•

IMP.-F608FX

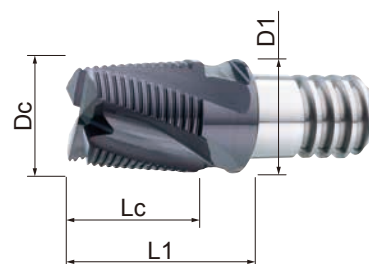
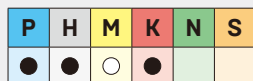
Interchangeable Roughing End Mills

4-Flute Roughing End Mill

Design: Fine-pitch wavy tooth profile with staggered geometry for effective chip breaking.

Application: Optimized for heavy-duty roughing processes.

Coating: Nano-multilayer coating for superior lubrication and wear resistance.



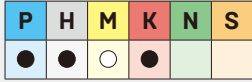
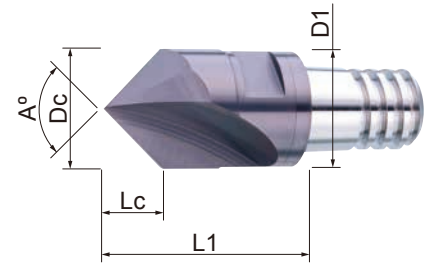
Code No.	Dc h10	Lc mm	L1 mm	D1 mm	C mm	Z	AlCrN FX
IMP10-F608FX100010	10	10	16	9.7	0.5	4	•
IMP12-F608FX120012	12	12	19	11.7	0.5	4	•
IMP16-F608FX160016	16	16	24	15.5	0.5	4	•
IMP20-F608FX200020	20	20	30	19.5	0.5	4	•
IMP25-F608FX250025	25	25	37.5	24.5	0.6	4	•

IMP.-E107FX

Interchangeable End Mills For Chamfering 90°

2 Flute Center Cutting

Application: Chamfering and contour milling.

MG
Tipped
CarbideAlCrN
FX

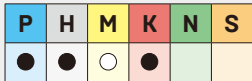
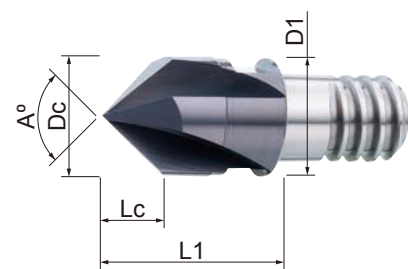
Code No.	Dc mm	Lc mm	L1 mm	D1 mm	A A°	Z	AlCrN FX
IMP08-E107FX080004A090	8	4	12	7.7	90	2	●
IMP10-E107FX100005A090	10	5	16	9.7	90	2	●
IMP12-E107FX120006A090	12	6	19	11.7	90	2	●
IMP16-E107FX160008A090	16	8	24	15.5	90	2	●
IMP20-E107FX200010A090	20	10	30	19.5	90	2	●
IMP25-E107FX250012A090	25	12.5	37.5	24.5	90	2	●

IMP.-E109FX

Interchangeable End Mills For Chamfering 90°

4-Flute End Mills For Chamfering

Application: Chamfering and contour milling.

MG
Tipped
CarbideAlCrN
FX

Code No.	Dc mm	Lc mm	L1 mm	D1 mm	A A°	Z	AlCrN FX
IMP08-E109FX080004A090	8	4	12	7.7	90	4	●
IMP10-E109FX100005A090	10	5	16	9.7	90	4	●
IMP12-E109FX120006A090	12	6	19	11.7	90	4	●
IMP16-E109FX160008A090	16	8	24	15.5	90	4	●
IMP20-E109FX200010A090	20	10	30	19.5	90	4	●
IMP25-E109FX250012A090	25	12.5	37.5	24.5	90	4	●

IMP.-E121FX

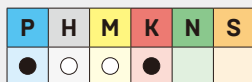
Interchangeable End Mills For Chamfering 90°

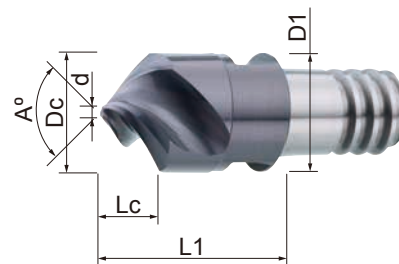
3 Flute Center Cutting

Design: Spiral cutting edge to reduce cutting resistance and vibration.

Performance: Sharp edges for superior surface finish and burr suppression.

Coating: AlCrN coating for extended tool life, enhanced machining efficiency, and optimal tool performance.


MG
Tipped
Carbide

AlCrN
FX


Code No.	Dc mm	d mm	Lc mm	L1 mm	D1 mm	A A°	Z	AlCrN FX
IMP08-E121FX080003A090	8	0.8	3.6	12	7.7	90	3	•
IMP10-E121FX100003A090	10	1	3.75	16	9.7	90	3	•
IMP12-E121FX120004A090	12	1.2	4.5	19	11.7	90	3	•
IMP16-E121FX160006A090	16	1.6	6	24	15.5	90	3	•
IMP20-E121FX200007A090	20	2	7.5	30	19.5	90	3	•
IMP25-E121FX250009A090	25	2.5	9.37	37.5	24.5	90	3	•

IMP.-E151FX

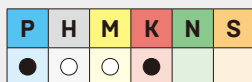
Interchangeable End Mills For Chamfering 90°

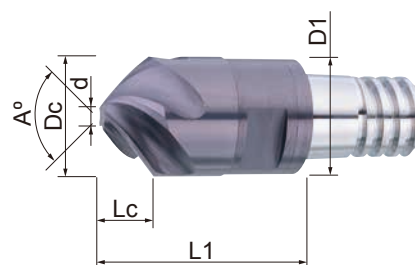
5 Flute Center Cutting

Design: Spiral cutting edge to reduce cutting resistance and vibration.

Performance: Sharp edges for superior surface finish and burr suppression.

Coating: AlCrN coating for extended tool life, enhanced machining efficiency, and optimal tool performance.


MG
Tipped
Carbide

AlCrN
FX


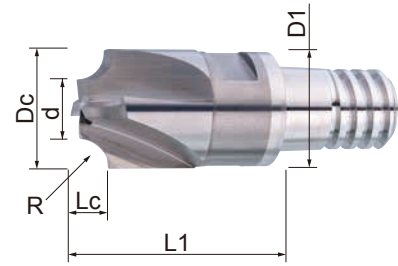
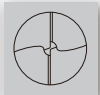
Code No.	Dc mm	d mm	Lc mm	L1 mm	D1 mm	A A°	Z	AlCrN FX
IMP08-E151FX080003A090	8	2	3	12	7.7	90	5	•
IMP10-E151FX100003A090	10	2.5	3.75	16	9.7	90	5	•
IMP12-E151FX120004A090	12	3	4.5	19	11.7	90	5	•
IMP16-E151FX160005A090	16	4	6	24	15.5	90	5	•
IMP20-E151FX200007A090	20	5	7.5	30	19.5	90	5	•
IMP25-E151FX250009A090	25	6.25	9.37	37.5	24.5	90	5	•

IMP.-E101FX

Interchangeable End Mills For Round Chamfering

Application: Ideal for corner rounding machining.

Coating: AlCrN nano-composite multilayer coating for superior wear resistance.

MG
Tipped
CarbideAlCrN
FX

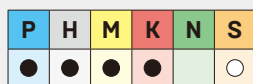
Code No.	R ±0.02	d mm	Dc mm	Lc mm	L1 mm	D1 mm	Z	AlCrN FX
IMP10-E101FX100010R010	R1	8	10	10	16	9.7	4	○
IMP10-E101FX100010R020	R2	6	10	10	16	9.7	4	○
IMP12-E101FX120012R030	R3	6	12	12	19	11.7	4	○
IMP12-E101FX120012R040	R4	4	12	12	19	11.7	4	○
IMP16-E101FX160016R050	R5	6	16	16	24	15.5	4	○
IMP20-E101FX200020R060	R6	8	20	20	30	19.5	4	○

※ Non-stock item, pricing based on order quantity. ○ Non-stock item, pricing based on order quantity.

IMP.-D903FX

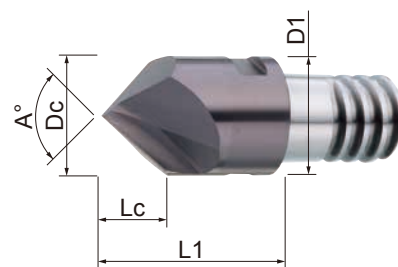
Interchangeable NC Spot Drills 90°

NC Spot Drills Strength: Enhanced strength suitable for various steels and cast irons up to 48HRC.
Application: Ideal for pre-drilling positioning and workpiece chamfering.



MG
Tipped
Carbide

AlCrN
FX



Code No.	Dc mm	Lc mm	L1 mm	D1 mm	A A°	Z	AlCrN FX
IMP08-D903FX080008A090	8	8	12	7.7	90	2	•
IMP10-D903FX100010A090	10	10	16	9.7	90	2	•
IMP12-D903FX120012A090	12	12	19	11.7	90	2	•
IMP16-D903FX160016A090	16	16	24	15.5	90	2	•
IMP20-D903FX200020A090	20	20	30	19.5	90	2	•

IMP.-D922FX

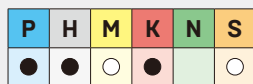
Interchangeable NC Spot Drills 90°

NC Starting Drill 90°

Design: Dual point angle for high tip strength.

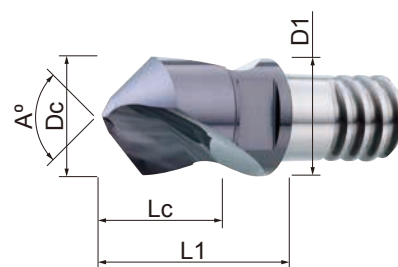
Coating: AlCrN coating for enhanced wear resistance and extended tool life.

Application: Positioning and spot drilling in various steel materials.



MG
Tipped
Carbide

AlCrN
FX



Code No.	Dc mm	Lc mm	L1 mm	D1 mm	A A°	Z	AlCrN FX
IMP08-D922FX080008A090	8	8	12	7.7	90	2	•
IMP10-D922FX100010A090	10	10	16	9.7	90	2	•
IMP12-D922FX120012A090	12	12	19	11.7	90	2	•
IMP16-D922FX160016A090	16	16	24	15.5	90	2	•
IMP20-D922FX200020A090	20	20	30	19.5	90	2	•
IMP25-D922FX250025A090	25	25	37.5	24.5	90	2	•

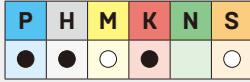
IMP.-D425TX

Interchangeable Flat Bottom Drills

Design: 0° point angle to prevent deviation or walking on non-planar surfaces.

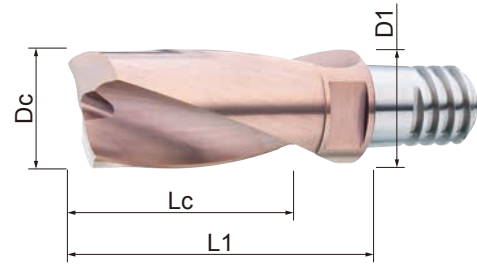
Application: Ideal for counterboring, inclined surfaces, curved surfaces, and other non-planar drilling.

Coating: AlTiSiN coating for extended tool life, enhanced machining efficiency, and optimal tool performance.



MG
Solid
Carbide

AlTiSiN
TX

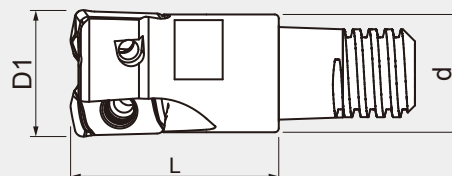


Code No.	Dc h7	Lc mm	L1 mm	D1 mm	Z	AlTiSiN TX
IMP08-D425TX080016	8	16	20	7.7	2	○
IMP08-D425TX085017	8.5	17	21	7.7	2	○
IMP08-D425TX090018	9	18	22	7.7	2	○
IMP08-D425TX095019	9.5	19	23	7.7	2	○
IMP10-D425TX100020	10	20	26	9.7	2	○
IMP10-D425TX105021	10.5	21	27	9.7	2	○
IMP10-D425TX110022	11	22	28	9.7	2	○
IMP10-D425TX115023	11.5	23	29	9.7	2	○
IMP12-D425TX120024	12	24	31	11.7	2	○
IMP12-D425TX125025	12.5	25	32	11.7	2	○
IMP12-D425TX130026	13	26	33	11.7	2	○
IMP12-D425TX135027	13.5	27	34	11.7	2	○
IMP12-D425TX140028	14	28	35	11.7	2	○
IMP12-D425TX145029	14.5	29	36	11.7	2	○
IMP12-D425TX150030	15	30	37	11.7	2	○
IMP12-D425TX155031	15.5	31	38	11.7	2	○
IMP16-D425TX160032	16	32	40	15.5	2	○
IMP16-D425TX165033	16.5	33	41	15.5	2	○
IMP16-D425TX170034	17	34	42	15.5	2	○
IMP16-D425TX175035	17.5	35	43	15.5	2	○
IMP16-D425TX180036	18	36	44	15.5	2	○
IMP16-D425TX185037	18.5	37	45	15.5	2	○
IMP16-D425TX190038	19	38	46	15.5	2	○
IMP16-D425TX195039	19.5	39	47	15.5	2	○
IMP20-D425TX200040	20	40	50	19.5	2	○

※ ○ Non-stock item, pricing based on order quantity.

IMP.-LOGU03

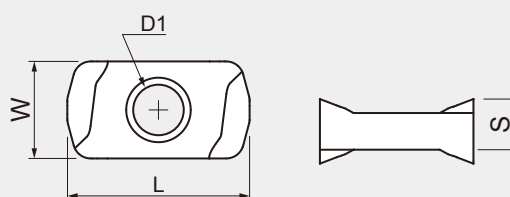
Interchangeable High Feed Milling Cutter Locking Type



Code No.	D1 mm	L mm	d h6	Z	Stock	corr. To	spanner
IMP16-LOGU03-160250	16	25	15.5	2	•	IMP16	T08
IMP16-LOGU03-170250	17	25	16.5	2	•	IMP16	T08
IMP16-LOGU03-180250	18	25	17.5	2	•	IMP16	T08
IMP20-LOGU03-200300	20	30	19.5	4	•	IMP20	T08
IMP20-LOGU03-210300	21	30	20.5	4	•	IMP20	T08
IMP20-LOGU03-220300	22	30	21.5	4	•	IMP20	T08
IMP25-LOGU03-250350	25	35	24.5	5	•	IMP25	T08
IMP25-LOGU03-260350	26	35	25.5	5	•	IMP25	T08

IMP.-LNGU0303

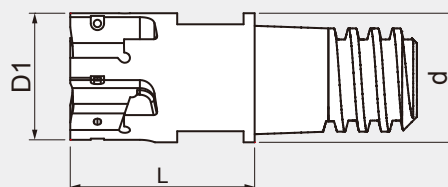
Interchangeable High Feed Milling Cutter insert



Code No.	W mm	L mm	D1 mm	S mm	AlCrN FX
LNGU0303	6.2	12	3.3	4	•

IMP.-ANKT07

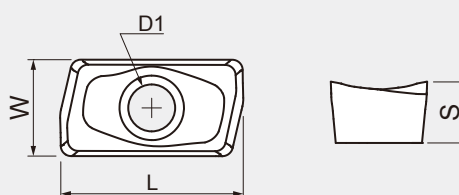
Interchangeable End Mill Locking Tooth Type



Code No.	D1 mm	L mm	d h6	Z	Stock	corr. To	spanner
IMP10-ANKT07-110200	11	20	10.7	2	•	IMP10	T08
IMP12-ANKT07-130200	13	20	12.7	3	•	IMP12	T08
IMP16-ANKT07-170230	17	23	16.5	3	•	IMP16	T08
IMP20-ANKT07-210300	21	30	20.5	5	•	IMP20	T08
IMP25-ANKT07-260350	26	35	25.5	6	•	IMP25	T08

IMP.-ANKT07

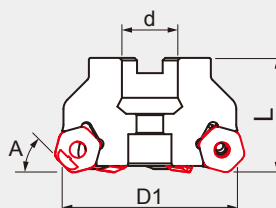
Interchangeable End Mill insert



Code No.	W mm	L mm	D1 mm	S mm	AlCrN FX
ANKT07	4.45	8.45	2.2	2.87	•

HNGX09

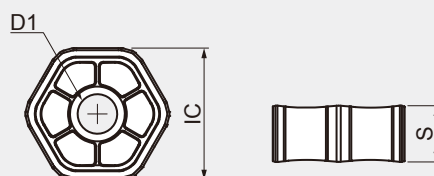
High Feed End Mill Disc Type



Code No.	D1 mm	L mm	d h6	A A°	Z	Stock	spanner
HNGX09-0500400A015	50	40	22	15	4	•	T08
HNGX09-0630400A015	63	40	25.4	15	6	•	T08
HNGX09-0800500A015	80	50	25.4	15	8	•	T08
HNGX09-0500400A045	50	40	22	45	4	•	T08
HNGX09-0630400A045	63	40	25.4	45	6	•	T08
HNGX09-0800500A045	80	50	25.4	45	8	•	T08
HNGX09-1000500A045	100	50	31.75	45	10	•	T08
HNGX09-1250630A045	125	63	38.1	45	12	•	T08

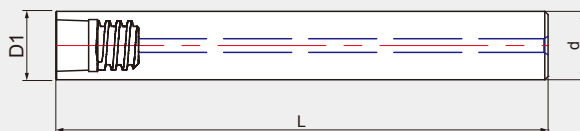
HNMX09

High Feed End Mill Disc insert



Code No.	IC mm	D1 mm	S mm	AlCrN FX
HNMX09	16.4	4.8	7.05	•

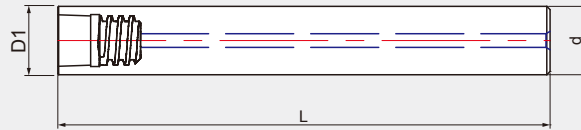
Interchangeable Multi-Purpose Solid Carbide Shanks



Code No.	D1 mm	L mm	d h6	Stock	corr. To	spanner
IMP08S0810000C	8	100	8	●	IMP-08	IMP08-TW
IMP10S1010000C	10	100	10	●	IMP-10	IMP10-TW
IMP10S1015000C	10	150	10	●	IMP-10	IMP10-TW
IMP12S1210000C	12	100	12	●	IMP-12	IMP12-TW
IMP12S1215000C	12	150	12	●	IMP-12	IMP12-TW
IMP12S1220000C	12	200	12	●	IMP-12	IMP12-TW
IMP14S1409000C	14	90	14	○	IMP-12	IMP14-TW
IMP14S1416000C	14	160	14	○	IMP-12	IMP14-TW
IMP16S1610000C	16	100	16	●	IMP-16	IMP16-TW
IMP16S1615000C	16	150	16	●	IMP-16	IMP16-TW
IMP16S1620000C	16	200	16	●	IMP-16	IMP16-TW
IMP16S1625000C	16	250	16	●	IMP-16	IMP16-TW
IMP16S1630000C	16	300	16	●	IMP-16	IMP16-TW
IMP18S1810000C	18	100	18	○	IMP-16	IMP18-TW
IMP18S1817000C	18	170	18	○	IMP-16	IMP18-TW
IMP20S2010000C	20	100	20	●	IMP-20	IMP20-TW
IMP20S2015000C	20	150	20	●	IMP-20	IMP20-TW
IMP20S2020000C	20	200	20	●	IMP-20	IMP20-TW
IMP20S2025000C	20	250	20	●	IMP-20	IMP20-TW
IMP20S2030000C	20	300	20	●	IMP-20	IMP20-TW
IMP25S2515000C	25	150	25	●	IMP-25	IMP25-TW
IMP25S2520000C	25	200	25	●	IMP-25	IMP25-TW
IMP25S2525000C	25	250	25	●	IMP-25	IMP25-TW
IMP25S2530000C	25	300	25	●	IMP-25	IMP25-TW

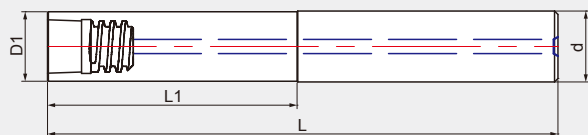
※ ○ Non-stock item, pricing based on order quantity.

Interchangeable Multi-Purpose Solid Carbide Shanks

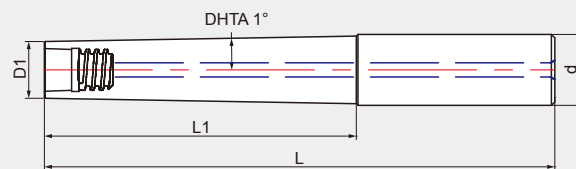


Code No.	D1 mm	L mm	d h6	Stock	corr. To	spanner
IMP08S08070000C	8	70	8	•	IMP08	IMP08-TW
IMP10S10070000C	10	70	10	•	IMP10	IMP10-TW
IMP10S10090000C	10	90	10	•	IMP10	IMP10-TW
IMP10S10110000C	10	110	10	•	IMP10	IMP10-TW
IMP12S12080000C	12	80	12	•	IMP12	IMP12-TW
IMP12S12100000C	12	100	12	•	IMP12	IMP12-TW
IMP12S12130000C	12	130	12	•	IMP12	IMP12-TW
IMP14S14090000C	14	90	14	•	IMP-12	IMP14-TW
IMP14S14160000C	14	160	14	•	IMP-12	IMP14-TW
IMP16S16090000C	16	90	16	•	IMP16	IMP16-TW
IMP16S16120000C	16	120	16	•	IMP16	IMP16-TW
IMP16S16150000C	16	150	16	•	IMP16	IMP16-TW
IMP18S18100000C	18	100	18	•	IMP-16	IMP18-TW
IMP18S18170000C	18	170	18	•	IMP-16	IMP18-TW
IMP20S20100000C	20	100	20	•	IMP20	IMP20-TW
IMP20S20140000C	20	140	20	•	IMP20	IMP20-TW
IMP20S20180000C	20	180	20	•	IMP20	IMP20-TW
IMP25S25110000C	25	110	25	•	IMP25	IMP25-TW
IMP25S25160000C	25	160	25	•	IMP25	IMP25-TW
IMP25S25210000C	25	210	25	•	IMP25	IMP25-TW

Interchangeable Multi-Purpose Solid Carbide Shanks



Picture 1

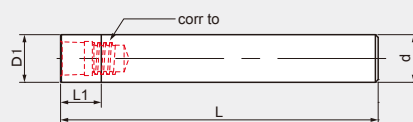


Picture 2

Code No.	D1 mm	L1 mm	DHTA mm	L mm	d h6	Stock	Picture	corr. To	spanner
IMP08U08070012C	7.7	12	-	70	8	●	1	IMP08	IMP08-TW
IMP10U10070015C	9.7	15	-	70	10	●	1	IMP10	IMP10-TW
IMP10U10090035C	9.7	35	-	90	10	●	1	IMP10	IMP10-TW
IMP10U10110055C	9.7	55	-	110	10	●	1	IMP10	IMP10-TW
IMP10A12110055C	9.7	55	1°	110	12	●	2	IMP10	IMP10-TW
IMP12U12080018C	11.7	18	-	80	12	●	1	IMP12	IMP12-TW
IMP12U12100038C	11.7	38	-	100	12	●	1	IMP12	IMP12-TW
IMP12U12130068C	11.7	68	-	130	12	●	1	IMP12	IMP12-TW
IMP12A16130068C	11.7	68	1°	130	16	●	2	IMP12	IMP12-TW
IMP16U16090024C	15.5	24	-	90	16	●	1	IMP16	IMP16-TW
IMP16U16120054C	15.5	54	-	120	16	●	1	IMP16	IMP16-TW
IMP16U16150084C	15.5	84	-	150	16	●	1	IMP16	IMP16-TW
IMP16A20150084C	15.5	84	1°	150	20	●	2	IMP16	IMP16-TW
IMP20U20100030C	19.5	30	-	100	20	●	1	IMP20	IMP20-TW
IMP20U20140070C	19.5	70	-	140	20	●	1	IMP20	IMP20-TW
IMP20U20180110C	19.5	110	-	180	20	●	1	IMP20	IMP20-TW
IMP20A25180110C	19.5	110	1°	180	25	●	2	IMP20	IMP20-TW
IMP25U25110038C	24.5	38	-	110	25	●	1	IMP25	IMP25-TW
IMP25U25160088C	24.5	88	-	160	25	●	1	IMP25	IMP25-TW
IMP25U25210138C	24.5	138	-	210	25	●	1	IMP25	IMP25-TW

IMP.S....S

Interchangeable Multi-Purpose Alloy Shanks

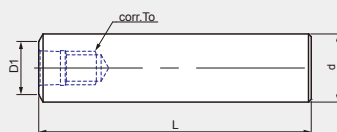


Code No.	D1 mm	L1 mm	L mm	d h6	Stock	corr. To	spanner
IMP08S08060007S	7.7	7	60	8	●	IMP-08	IMP08-TW
IMP10S10070009S	9.7	9	70	10	●	IMP-10	IMP10-TW
IMP12S12080011S	11.7	11	80	12	●	IMP-12	IMP12-TW
IMP16S16090015S	15.5	15	90	16	●	IMP-16	IMP16-TW
IMP20S20100019S	19.5	19	100	20	●	IMP-20	IMP20-TW
IMP25S25110024S	24.5	24	110	25	●	IMP-25	IMP25-TW

Note: Not suitable for heavy-duty cutting.

IMP.S....S

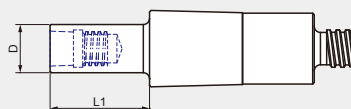
Interchangeable Multi-Purpose Alloy Shanks (High Rigidity)



Code No.	D1 mm	L mm	d h6	Stock	corr. To	spanner
IMP08S10060000S	8	60	10	●	IMP-08	IMP-08TW
IMP10S12060000S	10	60	12	●	IMP-10	IMP-10TW
IMP12S16070000S	12	70	16	●	IMP-12	IMP-12TW
IMP16S20080000S	16	80	20	●	IMP-16	IMP-16TW
IMP20S25090000S	20	90	25	●	IMP-20	IMP-20TW

APC20-IMP..

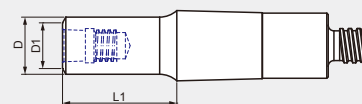
APC Modular Interchangeable Shanks (Straight Shank)



Code No.	D mm	L1 mm	Stock	corr. To	spanner
APC20-IMP08S10000016	7.7	16	•	IMP-08	IMP-08TW
APC20-IMP10S10000020	9.7	20	•	IMP-10	IMP-10TW
APC20-IMP12S12000024	11.7	24	•	IMP-12	IMP-12TW
APC20-IMP16S16000032	15.5	32	•	IMP-16	IMP-16TW
APC20-IMP20S20000040	19.5	40	•	IMP-20	IMP-20TW

APC20-IMP..

APC Modular Interchangeable Shanks (High Rigidity)



Code No.	D mm	D1 mm	L1 mm	Stock	corr. To	spanner
APC20-IMP08S12000024	12	7.7	24	•	IMP-08	IMP-08TW
APC20-IMP10S14000028	14	9.7	28	•	IMP-10	IMP-10TW
APC20-IMP12S16000032	16	11.7	32	•	IMP-12	IMP-12TW
APC20-IMP16S20000040	20	15.5	40	•	IMP-16	IMP-16TW
APC20-IMP20S25000050	25	19.5	50	•	IMP-20	IMP-20TW

Torque Wrench

Code No.	Price NT.
TW0525NM	•



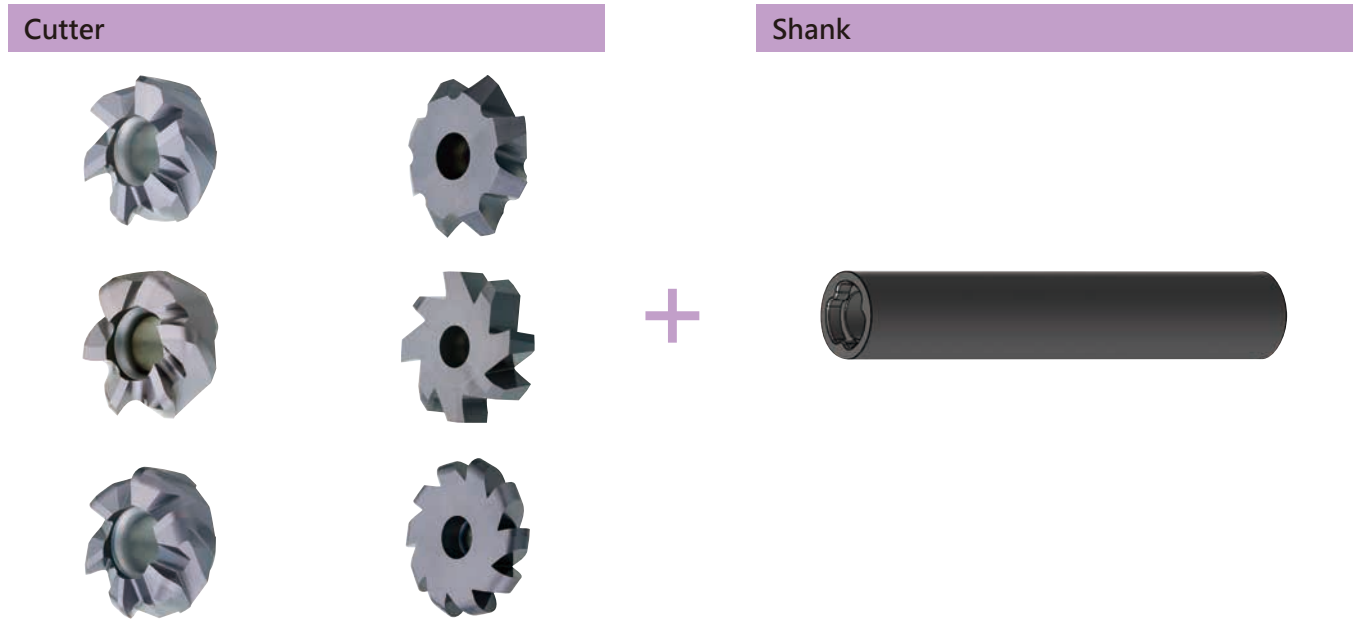
Code No.	(N.m)	Price NT.
IMP08-TW	8	•
IMP10-TW	10	•
IMP12-TW	12	•
IMP16-TW	18	•
IMP20-TW	22	•
IMP25-TW	25	•



IQP Series

Interchangeable Quick-Purpose End Mills Cutter And Shank

Tools Part



±0.015mm
Runout Tolerance

Code No.

◆ Cutter

IQP10 - B288 FX 1000 30 R05

①
Pair with Shank

②
Series

③
Coating

④
Dc

Example:
Dc 16mm → 1600
Dc 15.88mm → 1588

⑤
Lc

Example:
Lc 4mm → 04
Lc 10mm → 10

⑥
Edge

A Angle
R Corner Radius

◆ Shank

IQP10 S 10 070 000

①
Pair with Cutter

②
Type

S Straight
U Neck
A Conical Neck

③
d

④
L

⑤
L1

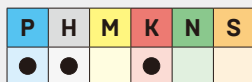
IQP.-E150FX

Interchangeable High Performance End Mills With Corner

Materials & Coating: MG micro grain tungsten carbide with nano-multilayer coating for superior lubrication and wear resistance.

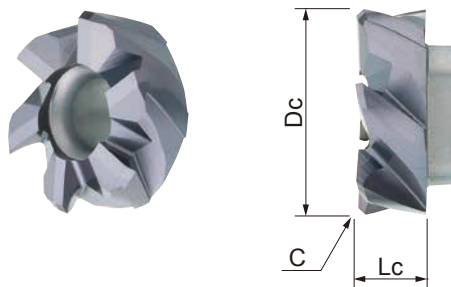
Performance: Extended tool life; high strength with short flutes.

Application: Ideal for layer milling in high-hardness materials and high-precision molds.



MG
Solid
Carbide

AlCrN
FX



Code No.	Shank IQP	Dc 0 -0.03	C	Lc mm	Z		AlCrN FX
IQP08-E150FX080030	8	8	0.16	3	4	T08	•
IQP10-E150FX100030	10	10	0.25	3	4	T09	•
IQP12-E150FX120040	12	12	0.3	4	5	T15	•
IQP16-E150FX160050	16	16	0.4	5	6	T20	•
IQP20-E150FX200060	20	20	0.5	6	6	T20	•

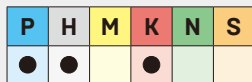
IQP.-B287FX

Interchangeable High Feed End Mills With Corner Radius

Materials & Coating: MG micro grain tungsten carbide with nano-multilayer coating for superior lubrication and wear resistance.

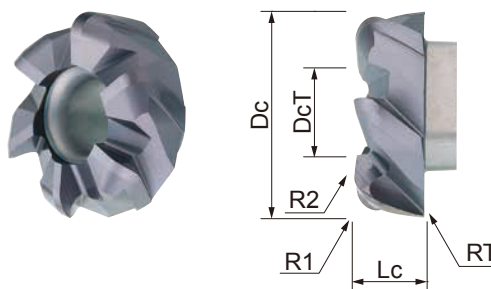
Performance: Extended tool life; high strength with short flutes.

Application: Ideal for layer milling in high-hardness materials and high-precision molds.



MG
Solid
Carbide

AlCrN
FX



Code No.	Shank IQP	Dc 0 -0.03	RT	DcT mm	R1	R2	Lc mm	Z		AlCrN FX
IQP08-B287FX080100030	8	8	1	5	0.8	5	3	4	T08	•
IQP10-B287FX100125030	10	10	1.25	6	1	6.5	3	4	T09	•
IQP12-B287FX120150040	12	12	1.5	8	1.2	8	4	5	T15	•
IQP16-B287FX160200050	16	16	2	10	1.6	10	5	6	T20	•
IQP20-B287FX200250060	20	20	2.5	13	2	13	6	6	T20	•

IQP.-B288FX

Interchangeable High Performance End Mills With Corner Radius

Materials & Coating: MG micro grain tungsten carbide with nano-multilayer coating for superior lubrication and wear resistance.

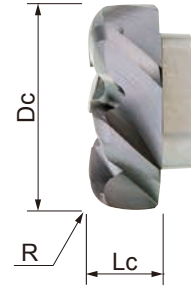
Performance: Extended tool life; high strength with short flutes.

Application: Ideal for layer milling in high-hardness materials and high-precision molds.



MG
Solid
Carbide

AlCrN
FX



Code No.	Shank IQP	Dc 0 -0.03	R +0.02 -0.02	Lc mm	Z		AlCrN FX
IQP08-B288FX080030R05	8	8	0.5	3	4	T08	●
IQP08-B288FX080030R10	8	8	1	3	4	T08	●
IQP10-B288FX100030R05	10	10	0.5	3	4	T09	●
IQP10-B288FX100030R10	10	10	1	3	4	T09	●
IQP10-B288FX100030R20	10	10	2	3	4	T09	●
IQP12-B288FX120040R05	12	12	0.5	4	5	T15	●
IQP12-B288FX120040R10	12	12	1	4	5	T15	●
IQP12-B288FX120040R20	12	12	2	4	5	T15	●
IQP16-B288FX160050R05	16	16	0.5	5	6	T20	●
IQP16-B288FX160050R10	16	16	1	5	6	T20	●
IQP16-B288FX160050R20	16	16	2	5	6	T20	●
IQP20-B288FX200060R05	20	20	0.5	6	6	T20	●
IQP20-B288FX200060R10	20	20	1	6	6	T20	●
IQP20-B288FX200060R20	20	20	2	6	6	T20	●

IQP.-T117FX

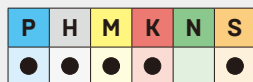
Keyseat Cutter

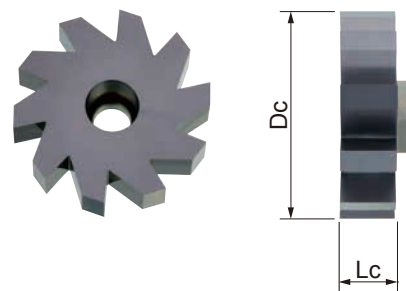
Application: Machining of T-slots or side grooves.

Design: Straight flute design.

Coating: AlCrN nano-composite multilayer coating for superior wear resistance.

Workpiece Materials: Effective for carbon steel, alloy steel, hardened steel, stainless steel, and difficult-to-cut materials.


MG
Solid
Carbide

AlCrN
FX


Code No.	Shank IQP	Dc 0 -0.03	Lc 0 -0.03	Z		AlCrN FX
IQP10-T117FX16030	10	16	3	8	T09	●
IQP10-T117FX16040	10	16	4	8	T09	●
IQP10-T117FX16050	10	16	5	8	T09	●
IQP10-T117FX16060	10	16	6	8	T09	●
IQP10-T117FX16080	10	16	8	8	T09	●
IQP10-T117FX20030	10	20	3	8	T09	●
IQP10-T117FX20040	10	20	4	8	T09	●
IQP10-T117FX20050	10	20	5	8	T09	●
IQP10-T117FX20060	10	20	6	8	T09	●
IQP10-T117FX20080	10	20	8	8	T09	●
IQP12-T117FX25030	12	25	3	10	T15	●
IQP12-T117FX25040	12	25	4	10	T15	●
IQP12-T117FX25050	12	25	5	10	T15	●
IQP12-T117FX25060	12	25	6	10	T15	●
IQP12-T117FX25080	12	25	8	10	T15	●
IQP16-T117FX30030	16	30	3	10	T20	●
IQP16-T117FX30040	16	30	4	10	T20	●
IQP16-T117FX30050	16	30	5	10	T20	●
IQP16-T117FX30060	16	30	6	10	T20	●
IQP16-T117FX30080	16	30	8	10	T20	●

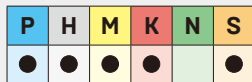
Chip breakers included for flute lengths [Lc] of 6mm and above.

Staggered Tooth Keyseat Cutter

Design: Staggered tooth design (LH helix / RH cut) to effectively suppress vibration and reduce cutting resistance.

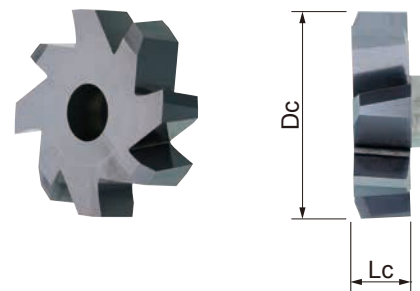
Coating: AlCrN nano-composite multilayer coating for superior wear resistance.

Workpiece Materials: Effective for carbon steel, alloy steel, hardened steel, stainless steel, and difficult-to-cut materials.



MG
Solid
Carbide

AlCrN
FX



Code No.	Shank IQP	Dc 0 -0.03	Lc 0 -0.03	Z		AlCrN FX
IQP10-T118FX16030	10	16	3	6	T09	●
IQP10-T118FX16040	10	16	4	6	T09	●
IQP10-T118FX16050	10	16	5	6	T09	●
IQP10-T118FX16060	10	16	6	6	T09	●
IQP10-T118FX16080	10	16	8	6	T09	●
IQP10-T118FX20030	10	20	3	6	T09	●
IQP10-T118FX20040	10	20	4	6	T09	●
IQP10-T118FX20050	10	20	5	6	T09	●
IQP10-T118FX20060	10	20	6	6	T09	●
IQP10-T118FX20080	10	20	8	6	T09	●
IQP12-T118FX25030	12	25	3	8	T15	●
IQP12-T118FX25040	12	25	4	8	T15	●
IQP12-T118FX25050	12	25	5	8	T15	●
IQP12-T118FX25060	12	25	6	8	T15	●
IQP12-T118FX25080	12	25	8	8	T15	●
IQP16-T118FX30030	16	30	3	8	T20	●
IQP16-T118FX30040	16	30	4	8	T20	●
IQP16-T118FX30050	16	30	5	8	T20	●
IQP16-T118FX30060	16	30	6	8	T20	●
IQP16-T118FX30080	16	30	8	8	T20	●

Chip breakers included for flute lengths [Lc] of 6mm and above.

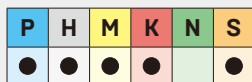
IQP.-T119FX

Dovetail Cutter

Application: Ideal for dovetail slot machining.

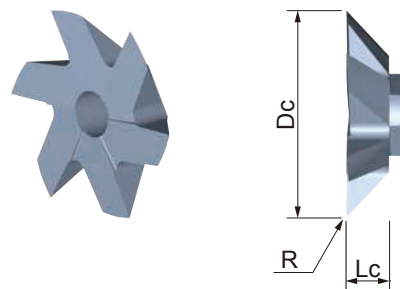
Coating: AlCrN nano-composite multilayer coating for superior wear resistance.

Workpiece Materials: Effective for carbon steel, alloy steel, hardened steel, stainless steel, and difficult-to-cut materials.



MG
Solid
Carbide

AlCrN
FX



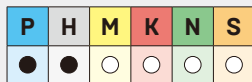
Code No.	Shank IQP	Dc 0 -0.03	A	R	Lc mm	Z		AlCrN FX
IQP10-T119FX160003A045	10	16	45	0.2	3	6	T09	●
IQP10-T119FX200004A045	10	20	45	0.2	4	6	T09	●
IQP12-T119FX250005A045	12	25	45	0.2	5	6	T15	●
IQP16-T119FX300006A045	16	30	45	0.2	6	6	T15	●
IQP10-T119FX160003A060	10	16	60	0.2	3	6	T09	●
IQP10-T119FX200004A060	10	20	60	0.2	4	6	T09	●
IQP12-T119FX250005A060	12	25	60	0.2	5	6	T15	●
IQP16-T119FX300006A060	16	30	60	0.2	6	6	T20	●

IQP.-E110FX

Convex Cutter 90°

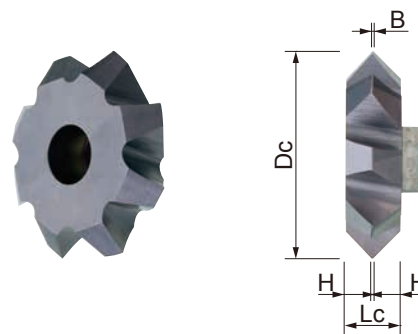
V-Groove End Mill: Designed for high-performance applications.

Performance: Features exceptional heat resistance; suitable for steel, stainless steel, cast iron, non-ferrous metals, and other difficult-to-machine materials.



MG
Solid
Carbide

AlCrN
FX

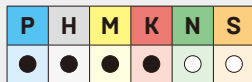


Code No.	Shank IQP	Dc 0 -0.03	Lc mm	H mm	B mm	A	Z		AlCrN FX
IQP10-E110FX-090-160	10	16	3	1.4	0.2	90	6	T09	●
IQP10-E110FX-090-200	10	20	4	1.9	0.2	90	6	T09	●
IQP12-E110FX-090-250	12	25	5	2.4	0.2	90	8	T15	●
IQP16-E110FX-090-300	16	30	6	2.9	0.2	90	8	T20	●

IQP.-T730FX

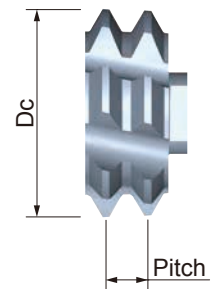
Micro Thread Mills (ISO)

Application: Ideal for thread processing in various materials, including carbon steel, alloy steel, hardened steel up to 48HRC, stainless steel, and cast iron.



MG
Solid
Carbide

AlCrN
FX



Code No.	Shank IQP	Pitch mm	M (coarse)	M (fine)	Dc 0 -0.03	Number of Teeth	No. of Flutes		AlCrN FX
IQP12-T730FX0160ISO10	12	1		M18~M60	16	3	6	T15	●
IQP12-T730FX0175ISO15	12	1.5		M20~M60	17.5	3	6	T15	●
IQP12-T730FX0185ISO20	12	2		M22~M60	18.5	2	6	T15	●
IQP12-T730FX0180ISO25	12	2.5	M22		18	2	6	T15	●
IQP12-T730FX0190ISO30	12	3	M24、M27	M28~M60	19	2	6	T15	●
IQP12-T730FX0200ISO35	12	3.5	M30、M33		20	2	6	T15	●
IQP12-T730FX0200ISO40	12	4	M36、M39	M40~M60	20	1	6	T15	●
IQP12-T730FX0200ISO45	12	4.5	M42、M45		20	1	6	T15	●
IQP12-T730FX0200ISO50	12	5	M48、M52		20	1	6	T15	●
IQP16-T730FX0300ISO60	16	6	M64、M68		30	1	6	T20	●
IQP16-T730FX0300ISO80	16	8		M130~M200	30	1	6	T20	●

IQP.-T204FX

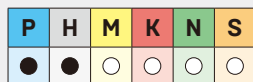
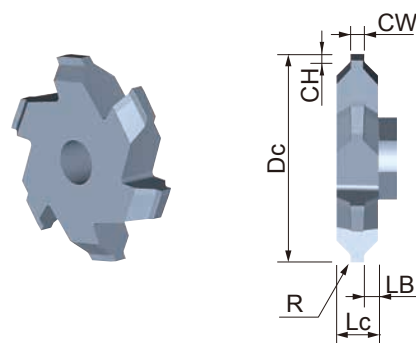
C-type Buckle Groove Cutter

Application: Ideal for C-slot (circlip) machining.

Coating: AlCrN nano-composite multilayer coating for superior wear resistance.

Workpiece Materials: Effective for carbon steel, alloy steel, hardened steel, stainless steel, and difficult-to-cut materials.

Standard: Suitable for DIN 471/472 standard retaining rings.

MG
Solid
CarbideAlCrN
FX

Code No.	Shank IQP	Dc 0 -0.03	CW +0.02 -0.02	CH mm	LB mm	t	R	Lc mm	LF mm	Z		AlCrN FX
IQP12-T204FX200138050	12	20	1.38	0.5	1.81	0.42	0.05	5	1.81	6	T15	●
IQP12-T204FX200138060	12	20	1.38	0.6	1.81	0.5	0.05	5	1.81	6	T15	●
IQP12-T204FX200138070	12	20	1.38	0.7	1.81	0.6	0.05	5	1.81	6	T15	●
IQP12-T204FX200138085	12	20	1.38	0.85	1.81	0.74	0.05	5	1.81	6	T15	●
IQP12-T204FX200168070	12	20	1.68	0.7	1.66	0.6	0.1	5	1.66	6	T15	●
IQP12-T204FX200168085	12	20	1.68	0.85	1.66	0.74	0.1	5	1.66	6	T15	●
IQP12-T204FX200168100	12	20	1.68	1	1.66	0.89	0.1	5	1.66	6	T15	●
IQP12-T204FX200193100	12	20	1.93	1	1.54	0.89	0.1	5	1.54	6	T15	●
IQP12-T204FX200193125	12	20	1.93	1.25	1.54	1.13	0.1	5	1.54	6	T15	●
IQP12-T204FX200223150	12	20	2.23	1.5	1.39	1.38	0.1	5	1.39	6	T15	●
IQP12-T204FX200273150	12	20	2.73	1.5	1.14	1.38	0.2	5	1.14	6	T15	●
IQP12-T204FX200273175	12	20	2.73	1.75	1.14	1.64	0.2	5	1.14	6	T15	●
IQP12-T204FX200325175	12	20	3.25	1.75	0.88	1.64	0.2	5	0.88	6	T15	●

Convex Cutter

Application: Machining of T-slots or side grooves.

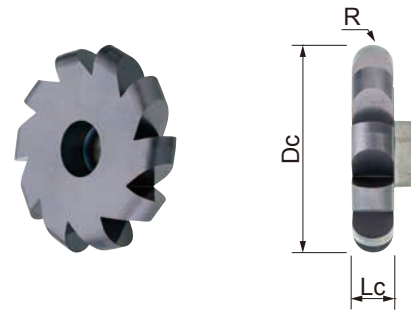
Coating: AlCrN nano-composite multilayer coating for superior wear resistance.

Workpiece Materials: Effective for carbon steel, alloy steel, hardened steel, stainless steel, and difficult-to-cut materials.



MG
Solid
Carbide

AlCrN
FX



Code No.	Shank IQP	Dc 0 -0.03	R	Lc 0 -0.03	Z		AlCrN FX
IQP10-T201FX160R10	10	16	1	2	8	T09	●
IQP10-T201FX160R15	10	16	1.5	3	8	T09	●
IQP10-T201FX160R20	10	16	2	4	8	T09	●
IQP10-T201FX160R25	10	16	2.5	5	8	T09	●
IQP10-T201FX160R30	10	16	3	6	8	T09	●
IQP10-T201FX160R40	10	16	4	8	8	T09	●
IQP10-T201FX200R10	10	20	1	2	8	T09	●
IQP10-T201FX200R15	10	20	1.5	3	8	T09	●
IQP10-T201FX200R20	10	20	2	4	8	T09	●
IQP10-T201FX200R25	10	20	2.5	5	8	T09	●
IQP10-T201FX200R30	10	20	3	6	8	T09	●
IQP10-T201FX200R40	10	20	4	8	8	T09	●
IQP12-T201FX250R10	12	25	1	2	10	T15	●
IQP12-T201FX250R15	12	25	1.5	3	10	T15	●
IQP12-T201FX250R20	12	25	2	4	10	T15	●
IQP12-T201FX250R25	12	25	2.5	5	10	T15	●
IQP12-T201FX250R30	12	25	3	6	10	T15	●
IQP12-T201FX250R40	12	25	4	8	10	T15	●
IQP16-T201FX300R10	16	30	1	2	10	T20	●
IQP16-T201FX300R15	16	30	1.5	3	10	T20	●
IQP16-T201FX300R20	16	30	2	4	10	T20	●
IQP16-T201FX300R25	16	30	2.5	5	10	T20	●
IQP16-T201FX300R30	16	30	3	6	10	T20	●
IQP16-T201FX300R40	16	30	4	8	10	T20	●

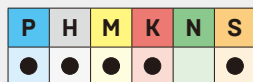
IQP.-T202FX

Convex Cutter

Application: Machining of T-slots or side grooves.

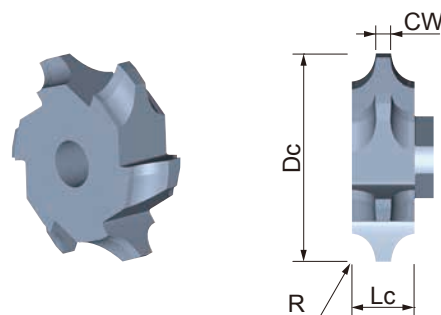
Coating: AlCrN nano-composite multilayer coating for superior wear resistance.

Workpiece Materials: Effective for carbon steel, alloy steel, hardened steel, stainless steel, and difficult-to-cut materials.



MG
Solid
Carbide

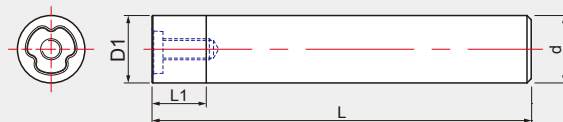
AlCrN
FX



Code No.	Shank IQP	Dc 0 -0.03	R	CW mm	Lc 0 -0.03	Z		AlCrN FX
IQP10-T202FX160050	10	16	0.5	2	3	8	T09	○
IQP10-T202FX160100	10	16	1	2	4	8	T09	○
IQP10-T202FX160150	10	16	1.5	2	5	8	T09	○
IQP10-T202FX160200	10	16	2	2	6	8	T09	○
IQP10-T202FX160300	10	16	3	2	8	8	T09	○
IQP10-T202FX200050	10	20	0.5	2	3	8	T09	○
IQP10-T202FX200100	10	20	1	2	4	8	T09	○
IQP10-T202FX200150	10	20	1.5	2	5	8	T09	○
IQP10-T202FX200200	10	20	2	2	6	8	T09	○
IQP10-T202FX200300	10	20	3	2	8	8	T09	○
IQP12-T202FX250050	12	25	0.5	2	3	10	T15	○
IQP12-T202FX250100	12	25	1	2	4	10	T15	○
IQP12-T202FX250150	12	25	1.5	2	5	10	T15	○
IQP12-T202FX250200	12	25	2	2	6	10	T15	○
IQP12-T202FX250300	12	25	3	2	8	10	T15	○
IQP16-T202FX300050	16	30	0.5	2	3	10	T20	○
IQP16-T202FX300100	16	30	1	2	4	10	T20	○
IQP16-T202FX300150	16	30	1.5	2	5	10	T20	○
IQP16-T202FX300200	16	30	2	2	6	10	T20	○
IQP16-T202FX300300	16	30	3	2	8	10	T20	○

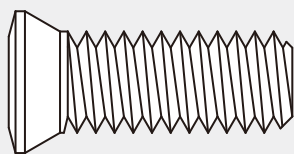
※ ○ Non-stock item, pricing based on order quantity.

Quick-Positioning Indexable Alloy Steel Tool Holder



Code No.	Shank IQP	D1 mm	L1 mm	L		d mm
IQP08U1006000S	8	7.7	12	60	T08	10
IQP10U1007000S	10	9.7	15	70	T09	10
IQP12U1208000S	12	11.7	18	80	T15	12
IQP16U1609000S	16	15.5	24	90	T20	16
IQP20U2010000S	20	19.5	30	100	T20	20

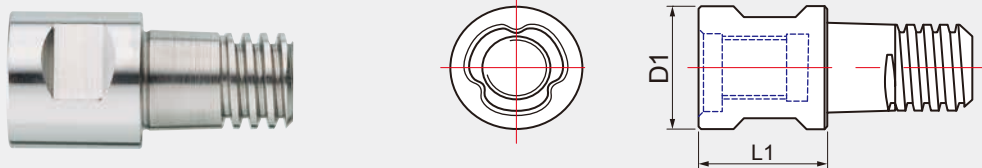
Screw fpr IQP



Code No.	TORX	Format	Stock
10SWT08	T08	M2.5×0.4×7	•
10SWT09	T09	M3×0.5×10	•
10SWT15	T15	M4×0.7×11	•
10SWT20	T20	M5×0.8×14	•

IMP to IQP

IMP to IQP Adapter



Code No.	Adapter EHS	D1 mm	L1 mm	IMP
IQP08-IMP08	8	7.7	10	8
IQP10-IMP10	10	9.7	13	10
IQP12-IMP12	12	11.7	13	12
IQP16-IMP16	16	15.5	15	16
IQP20-IMP20	20	19.5	18	20

Hardness Conversion Table

HRC	HB	HV10	N/mm ²
	71	75	240
	76	80	255
	81	85	270
	86	90	285
	90	95	305
	95	100	320
	100	105	335
	105	110	350
	109	115	370
	114	120	385
	119	125	400
	124	130	415
	128	135	430
	133	140	450
	138	145	465
	143	150	480
	147	155	495
	152	160	510
	157	165	530
	162	170	545
	166	175	560
	171	180	575
	176	185	595
	181	190	610
	185	195	625
	190	200	640
	195	205	660
	199	210	675
	204	215	690
	209	220	705
	214	225	720
	219	230	740
	223	235	755
	228	240	770
	233	245	785
22	238	250	800
23	242	255	820
24	247	260	835
25	255	268	860
26	258	272	870
27	266	280	900

HRC	HB	HV10	N/mm ²
28	273	287	920
29	278	293	940
30	287	302	970
31	295	310	995
32	301	317	1020
33	311	327	1050
34	319	336	1080
35	328	345	1110
36	337	355	1140
37	346	364	1170
38	354	373	1200
39	363	382	1230
40	372	392	1260
41	383	403	1300
42	393	413	1330
43	402	423	1360
44	413	434	1400
45	424	446	1440
46	435	458	1480
47	449	473	1530
48	460	484	1570
49	472	497	1620
50	488	514	1680
51	501	527	1730
52	517	544	1790
53	532	560	1845
54	549	578	1910
55	567	596	1980
56	584	615	2050
57	607	639	2140
58	622	655	
59		675	
60		698	
61		720	
62		745	
63		773	
64		800	
65		829	
66		864	
67		900	
68		940	

Technical Data - Materials

	Materials Groups		N/mm2	HB	JIS	DIN
P	GR.1	Non-alloyed Steel	≤ 700	≤ 210	SS330 SS400 SS490 S10C S15C S20C S25C S30C S35C S40C S45C S50C S55C S58C SUM22 SUM22L SUM24 SUM25 SK3 SUP4	RST37-1 St37-3 St37-2 9SMn28 9SMnPb28 9SMnPb36 Ck15 Ck25 CK30 Ck45 Cf53C10 C15 C20 C22C35 C45 C55 C60 Ck55 Ck60 C105W1 C105W1
	GR.2	<24HRC Low-alloyed Steel	700-1000	210-300	SCR415 SCR420 SCR430 SCR440 SCR445 SCM420 SCM415 SCM430 SCM440 SK1 SK2 SK3 SK5 SK6 SK7	St.44-2 St.52-3 100Cr6 2INiCrMo2 40NiCrMo22 17CrNiMo6 15Cr3 42Cr3 55Cr3 15CrMo5 36NiCr6 14NiCr10 34Cr4 41Cr4 16MnCr5 25CrMo4 34CrMo4 41CrMo4 42CrMo4 32CrMo12 50CrV4 41CrAlMo7 100Cr6 105WCr6
	GR.3	<30HRC Hi-alloyed Steel	>1000	>300	SKD1 SKD2 SKD3 SKD4 SKD11 SKD12 SKD61 P20 P21 P30 SUP3 SUP4 SUP6 SUP3 SUP6 SUP7 SUP9 SUP10 SKH2 SKH3 SKH52 SKH55	X210Cr12 X40CrMoV5 1 X100CrMoV5 1 X210CrW12 45WCrV7 X30WCrV9 3 X30WCrV9 3KU X165CrMoV12 X45GrSi93 S6-5-2 S6/5/2 S6/5/2/5 S2/9/2 X210Cr12 G
H	GR.4	30~38HRC Hardened Steel				
	GR.5	38~48HRC Hardened Steel				
	GR.6	48~56HRC Hardened Steel				
	GR.7	56~68HRC Hardened Steel				
M	GR.8	Stainless Steel	500~ 950	250~320	SUS301 SUS302 SUS303 SUS304 SUS316 SUS321 SUS410 SUS416 SUS420 SUS420J2 SUS430 SUS431 SUS440	X12CrNi17-7 X12CrNi18-8 X10CrNiSi18-9 X5CrNi18-10 X5CrMo17-12-2 X6CrNiTi18-10 X10Cr13 X12CrSi13 X30Cr13 X12CrMoSi7 X20CrNi17-2 X65CrMo14
K	GR.9	Cast Iron		180-280	FC100 FC150 FC200 FC250 FC300 FC350 FCD400 FCD500 FCD600 FCD700 FCMB310 FCMW330 FCMW370 FCMP490 FCMP540 FCMP590 FCMP690	GG10 GGI5 GG20 GG25 GG30 GG35 GGG40 GGG50 GGG60 GGG70 GTS-35 GTS-45 GTS-55 GTS-65 GTS65-02 GTS-70-02
N	GR.10	Aluminium		Si<10%	A1050 A1080 A2014 A3003 A5052 A6061 A7075 MPI	A199 ,5 A199.8 AlMnCu AlCuSiMn AiMgSiCu AlZnMgCu4.5 MgAl3Zn G-AlSi5Mg
				Si>10%	A1050 A1080 A2014 A3003 A5052 A6061 A7075 MPI	GD-AISi12 GD-AISi10Mg G-AISi10Mg AISi17C4 AISi21CuNiMg AISi25CuNiMg
	GR.11	Copper		<250	C1220P C3710P C2400P C5210P C3602BE C3601BE C3604BE C3771BE C4622BE C4430P C6711P BC3 BC6	CuZn36Pb3 CuZn39Pb2 CuZn39Pb3 CuZn40Pb2 CuZn28Sn1 CuZn38Si1 CuZn15 CuZn36 CuZn40 ZCuZn10Zn2 CuAl5 CuAl8Fe3 CuAl10Ni5Fe4 CuBe2F40 CuSi3Mn G-CuSn5Zn Pb G-CuSn10Zn
				>250	C1700P C1720P C5212P C6782BE	CuBe1.7 F55 CuBe1.7 FI10 CuBe2 F70 CuBe2 F125 CuZn40Al1 CuAl1Ni6Fe5 AMPCO 20
	GR.12	Plastics			PP PS POM PC PA PMMA TFE CTFE	
	GR.13	FRP CFRP Composite Material			GFK KFK AFK	
	GR.14	Graphite				
S	GR.15	Titanium	700~ 1250	210~370	TP(TR)270H© TP(TR)340H© TP(TR)550H(C) TP(TR)480H© TP(TR)270Pd© TP(TR)340Pd TP(TR)550Pd© TP(TR)480Pd© TAP6400	Ti 1 Ti 2 Ti 3 Ti 4 Ti 1 Pd Ti 2 Pd Ti 3 Pd Ti99.7 Ti99.8 TiAl6V4 TiAl6V4ELI TiAl5Sn2.5 TiAl4Mo4Sn4Si0.5 TiCu2
	GR.16	Nickel	900~ 1200	260~350	Incoloy 800 Incoloy825 I Inconel 400 nconel 625 Inconel 600 Inconel 700 Inconel 713 Inconel 718 Haynes 600 Hastelloy C Nimocast PD36 Nimonic PE13 Nimonic 901 Nimonic 75 Rene 95 ,Monet400, Mar-M432, Waspaloy ,Jessop G64 AirResist213 Jetalloy209	
	GR.17	High Temp Alloys	900- 1400	210-400	SUH309 SUH310 SUH330 SUH1 SUH31 SUH35 SUH321 SUH430 SUH420J1	X15CrNiSi20-12 X15CrNiSi25-20 X45CrSi9-3 X45CrNiW18-9 X53CrMnNiN21-9 X10CrNiTi18-9 X6Cr17 X20Cr13

AISI/SAE	BS	GB
1010 1015 1020 1025 1030 1035 1040 1045 1050 1055 1060 W1 W210 1213 12L13 12L14	230M07 080M15 060A35 080M46 060A35 080M46 060A52 070M55 080A62 070M55 080 A 62 060A 96 BW 1A BW2	Q215AF Q235A-D 10 15 20 25 30 35 40 45 50 55 60 Y12 Y15pb
9840 4340 5132 5140 5115 4130 4137, 4135 4140, 4142 4140 L3 L6 ASTM A350LF5 8620 8740 5010 5140 5155 9262 52100	708M40 708M40 722M24 735A50 805M20 311-TYPE7 820A16 523M15 527A60 534 A99 4360 43C 4360 50B	15Cr 20Cr 30Cr 40Cr 45Cr 20CrMo 15CrMo 30CrMo 42CrMo
D3 H13 A2 S1 H21 HW3 D3 M2 M35 M7 HNV3	BD3 BH13 BA2 BS1 BH21 40IS45 4959BA2 BM2 BM35	Cr12 Cr12MoV Cr12MoV1 CrMo1v 4Cr5MoSiV1 W18Cr4V W18Cr4V5Co5 W6Mo5Cr4V2Co5 W6MoCr4V3 55CrMnA 85 60Si2Mn 50CrVa
AISI301 AISI302 AISI303 AISI304 AISI316 AISI321 AISI410 AISI416 AISI420 AISI430 AISI431 AISI440	430S15 410S21 420S45 431S29 430S17 304S11 303S21 304C12 321S12 316S16 317S12 403S17	1Cr17Ni7 1Cr18Ni9 Y1Cr18Ni9 0Cr18Ni9 0Cr17Ni12Mo2 0Cr18Ni11Ti 1Cr13 Y1Cr13 3Cr13 1Cr17 7Cr17 2Cr13 Y3Cr13
No20B No25B No30B No35B No45B No50B 60-40-18 80-55-06 A43D2 100-70-03 32510 40010 50005 70003 A220-70003 A220- 80002	Grade150 Grade220 Grade260 Grade300 Grade350 Grade400 SNG420/12 SNG500/7 SNG600/3 SNG700/2 8290/6 B340/12 P440/7 P510/4 P570/3 P690/2	HT-100 HT-150 HT-200 HT-250 HT-300 HT350 QT400-15 QT450-10 QT500-7 QT600-3 QT700-2 KTH-330-08 KTZ-450-06 KTZ-550-04 KTZ-700- 02
2014 3003 5052 6061 7075 AZ31C A296.0 A331.1	LM4 LM12 LM16 LM21 LM22 LM24 LM25 LM27	L1 L3 LD10 LF2 LF21 LD2 LC4 LC9
S12A SC84A SC102A AA336 A332 B26M520.0	LM5 LM6 LM9 LM13 LM28 LM29 LM30	ZL104 Y104 Y102 ZL102 ZL301
C36000 C37700 C44300 C46200 C83600 C90500 CT-00 10-N 75Cu-5Al 77Cu-15Pb-7Sn-1Fe 1C Am CDA544 CDA65600	CA104 CZ121 CZ122 CZ108 CZ114 CDA544 CDA65600 CDA656	ZCuSn5Pb5Zn5 G-CuSn10Z HPb 61-1 HPb 59-1 HSn 62-1
CI7000 CI7200		QBe1.7 QBe2 HA1 60-1-1
AMS R54520 AMS R56400 AMS R56401 Gr.1 Gr.2 Gr.3 Gr.4 Gr.11 Gr.7 Gr.5	TA14/17 TA10-13 TA28 TA11	TA0 TA1 TA2 TA3 TA9 TC4
AISI309 AISA310 HNV3 EV9 AISI321 AISI430 AISI420	330C11 Hr5.203-4 3146-3 HR8 3072-76 Hr401.601	2Cr23Ni13 2Cr25Ni20 4Cr9Si2 5Cr21Mn9Ni4N 0Cr18Ni11Ti 1Cr17 2Cr13



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