

# Industrial Solutions of KORLOY



Holystar B/D 953–1, Doksanbon–Dong, Geumcheon–Gu, Seoul, Korea tel. 82. 2. 522. 3181 fax. 82. 2. 522. 3184, 82. 2. 3474. 4744

Website: www.korloy.com e-mail: export@korloy.com

#### CHEONGJU FACTORY

53-16, Songjeong-dong, Hungduk-gu, Cheongju, Chungcheongbuk-do, Korea tel. 82. 43. 262. 0141 fax. 82. 43. 263. 8731

#### JINCHEON FACTORY

767–1, Gwanghyewon–ri, Gwanghyewon–myon, Jincheon–gun, Chungcheongbuk–do, Korea tel. 82. 43. 535. 0141 fax. 82. 43. 535. 0144

#### R & D Institute

53-16, Songjeong-dong, Hungduk-gu, Cheongju, Chungcheongbuk-do, Korea tel. 82. 43. 262. 0141 fax. 82. 43. 262. 0711

## 

2750 Oregon Court, South Bay Business Park, Suite M7, Torrance, CA90503, USA tel. 1. 310, 782, 3800 toll free, 1. 888, 711, 0001 fax, 1. 310, 782, 3885

Website: www.KorloyAmerica.com e-mail: KorloyAmerica@korloy.com





**A KORLOY Inc.** 

2750 Oregon Court, South Bay Business Park, Suite M7, Torrance, CA90503, USA tel. I. 310, 782, 3800 toll free I. 888, 711, 0001 fax. I 310, 782, 3885

Website: www.KorloyAmerica.com e-mail: KorloyAmerica@korloy.com

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### GEAR MACHINING

The gear is primary parts in the machine industry, KORLOY provides wide range of module(M8~M50) of external and internal gear for finishing, medium and roughing,

KORLOY's special cutters for gear machining have got good reputation from our customers.

#### • ROLL MACHINING 8

KORLOY has various roll machining tools for different materials such as ductile cast Iron, admite, chilled steel, high chromium steel.

The perfect combination of high hardness coating grade and unique chip breaker provides high productivity for our customers.

#### • BAR PEELING 10

Bar peeling is basic machining of automotive, ship and aerospace industries. KORLOY's various bar peeling cutting tools are satisfying our customers' needs.

#### • POWER GENERATION

Developing green energy (wind, nuclear, solar power generation) has been hot issues due to global warming and environmental issue.

KORLOY supplies flanges, shafts and gear machining tools for wind power generation and various parts of gas and nuclear power generation as well.

## Industrial Solutions of KORLOY

### • SHIP BUILDING

Korea is No,1 ship building country in the world and KORLOY has variety of ship building machining tools applied for cylinder blocks, crank shafts, pistons, cylinder liners and propeller housing in high efficiency machining.

#### RAILROAD AND RAIL WHEEL

KORLOY provides the best solutions in rail separators, manganese crossing rail, hook-up rail and rail wheel machining.

Railroad industry is continuously growing by switching other transportation,

#### • PIPE INDUSTRY 24

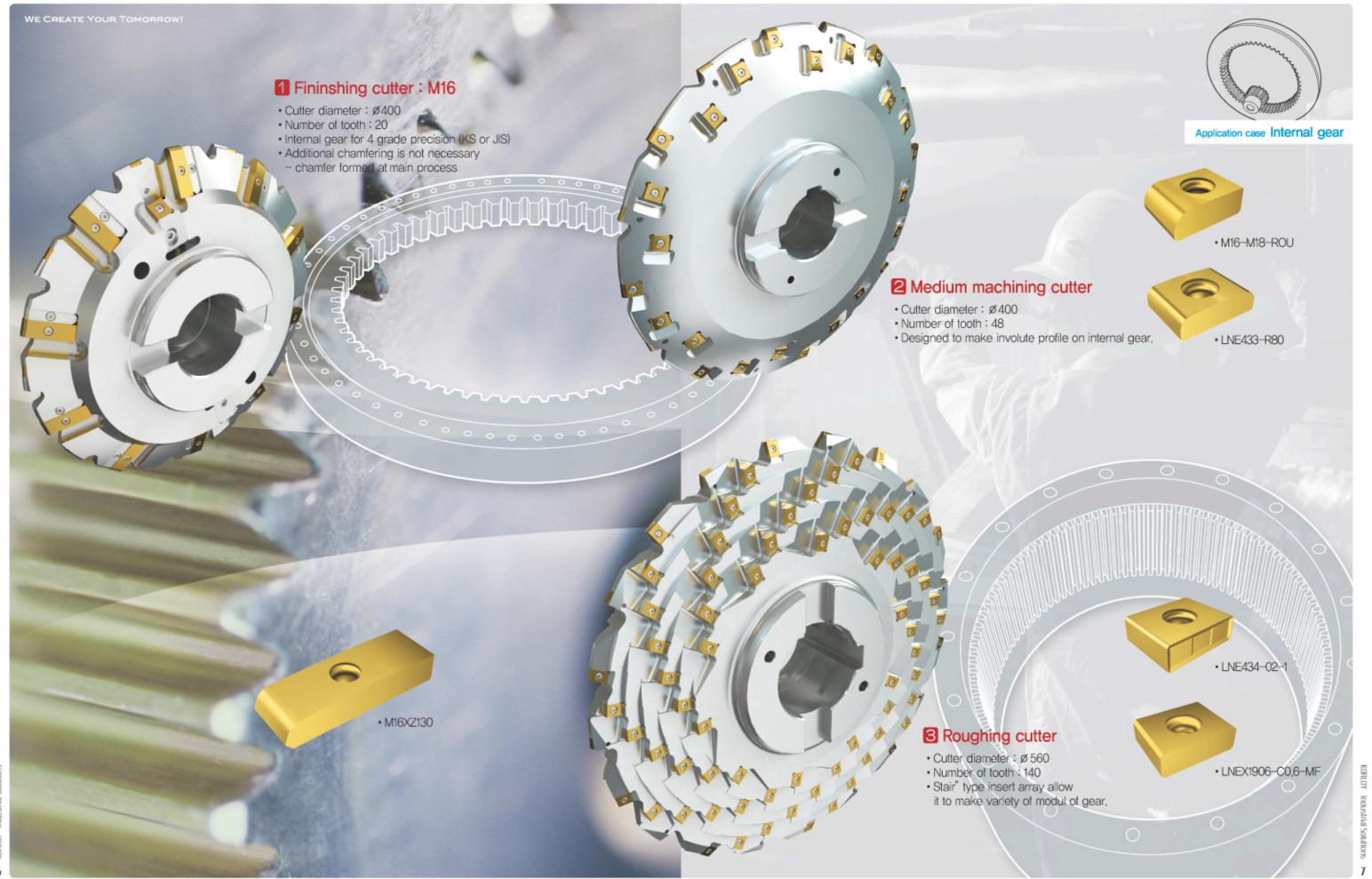
Steel pipes for laying, pressing, constructing, oil and gas are found in various industries and everywhere,

KORLOY supplies high quality tools to comply with customers needs such as edge miller, bead removal and end-facing cutting tools for pipe machining,

### • AEROSPACE

The scale of global aerospace industry in 2006 was 34 billion\$ and expected scale in 2011 is more than 10 times that of 2006's (525 billion\$),

No.1 aerospace country is U.S.A and followed by UK, France, Germany, Canada. Nowadays, many countries such as China, Japan, Russia invest a lot in the aerospace industry. KORLOY, as a technology oriented precision machining tools supplier, ensures the high quality machining in engines, turbines, wings, frames, and landing gears.



KORLOY Inchestrial

## External turning of Roll

For roughing and medium of external

turning

- Match of high hardness coating grade (NC6110) with chip breaker provides longer tool life with smooth chip control.
- Various cutting edge designs are applicable according to work-piece materials and cutting conditions.



Application case Turning/Forming/Parting-of

# Application case

The combination of high hardness coating grade (NC6110) and chip breaker shows better performance.



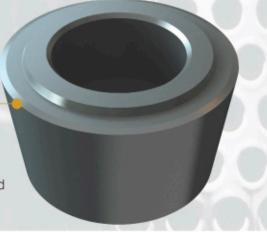


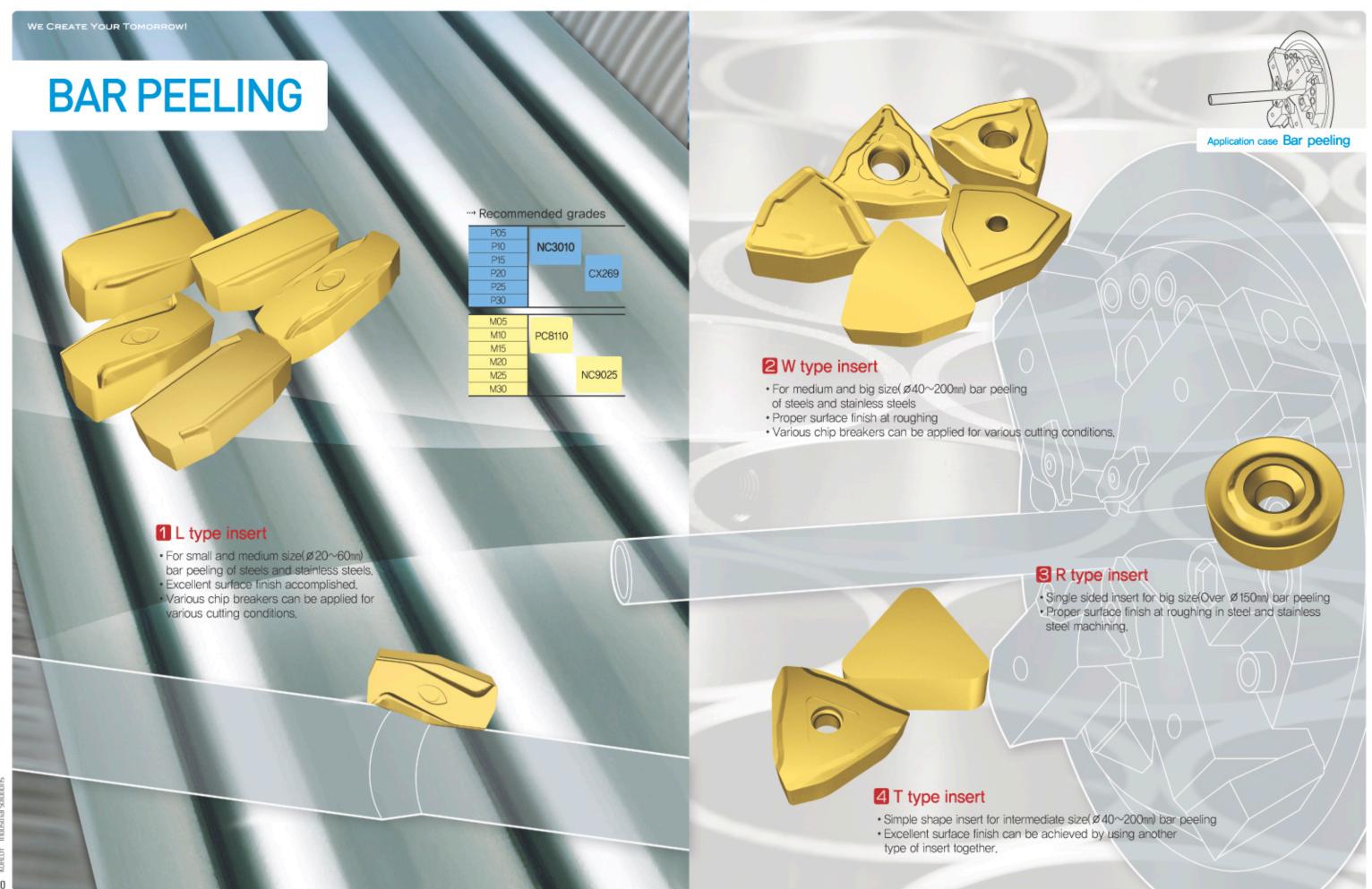
- Equipped with wide chip breaker enough to prevent crater wear
- Better chip control from the beginning of the machining, together with high hardness coating grade provides 3 times longer tool life than conventional tool, (especially at finishing)

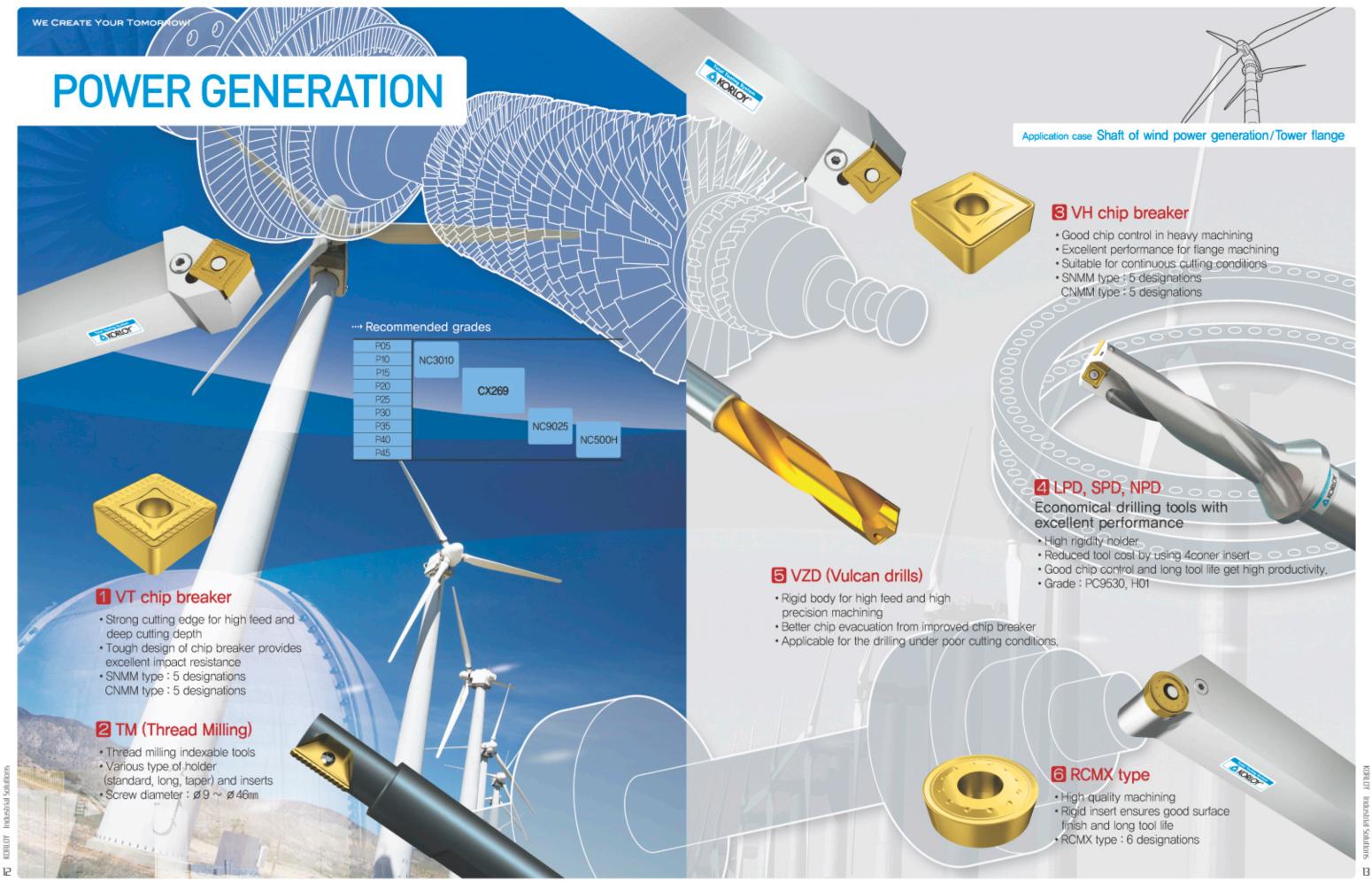
For forming and machining of joint

## S Forming and Grooving of Roll

- Special chip breaker focus on suitable chip forming (engineered chip breaker width and depth)
- Cutting edge strengthening treatment prevents un–expected fracture of insert,







# SHIP BUILDING

- ··· Recommended grades
- For Steel : PC3500
- For Cast iron : PC6510



## 1 Roughing cutter for cylinder block

- · Cutter diameter: Ø200
- · Applicable insert: SNCF1507ANN-MF
- · Economical concepts: 8 edge available insert, high feed available tool
- KORLOY exclusive latch clamping system provides quick change of insert,

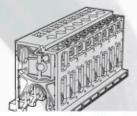


## Cylinder block cam shaft boring cutter (Aluminum body cutter)

• Cutter diameter : Ø 270

Applicable insert: LNE434 / SDKX1506

· Light aluminum cutter body, easy to handle, makes high precision boring.



Application case Engine Block

## 4 Cylinder block bearing cap seat machining cutter

· Cutter diameter: Ø250

· Applicable insert : RDKT2006M0

 Several sizes of inserts are prepared to meet the radius requirement of work-piece.

· Rigid inserts for high efficiency machining





YCE434-R3

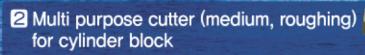


## machining cutter

· Cutter diameter: Ø 250

· Applicable insert: YCE434-01

· Cutting edge height adjustable device provides excellent surface finish.



- Cutter diamete: Ø 200
- Applicable insert : SNCF1507ANN-MF
- · Economical concepts: 8 edge available insert, high feed available tool
- KORLOY exclusive latch clamping system provides quick change of insert.

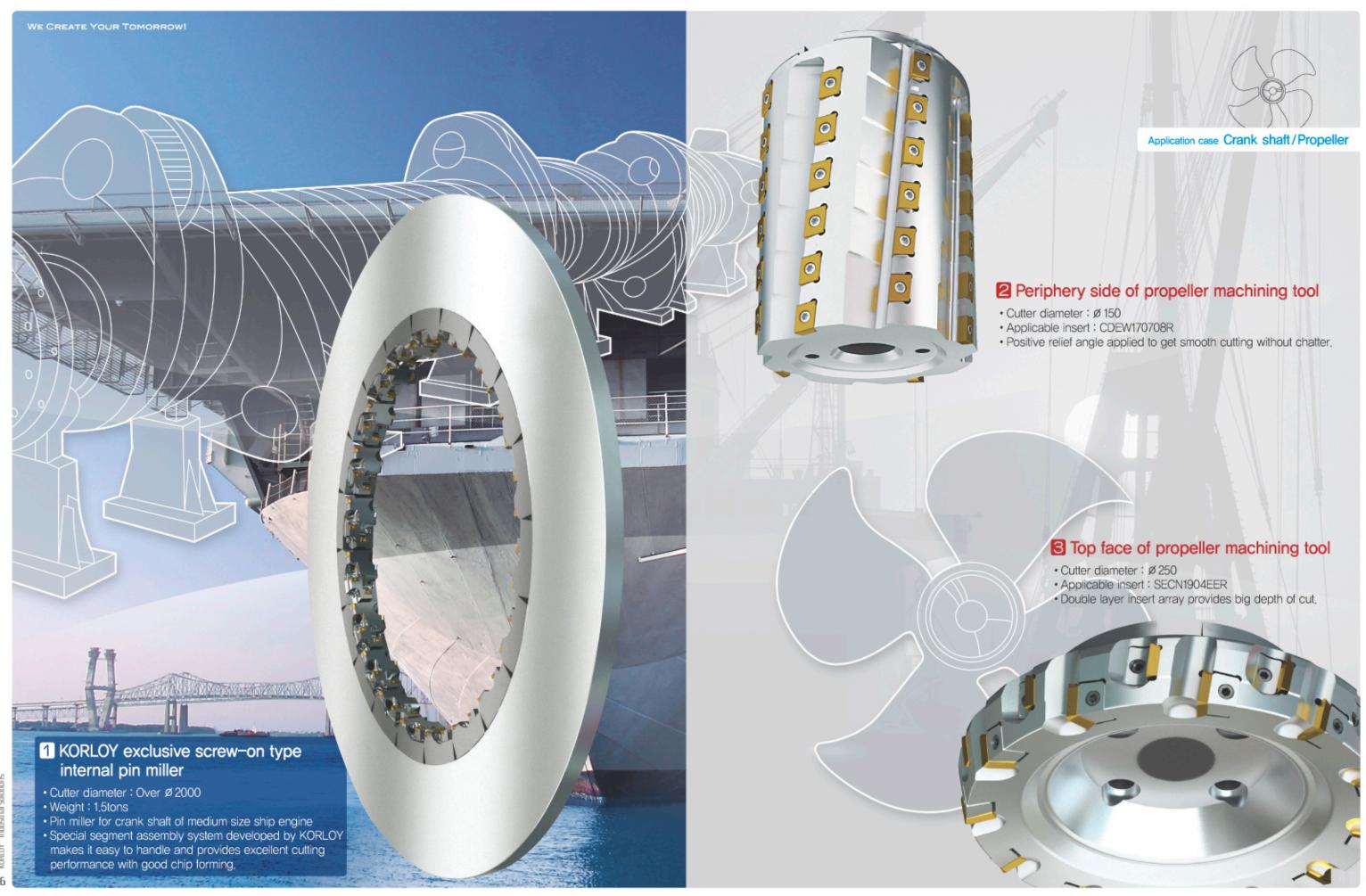


## 6 High rake-angle applied cylinder block roughing cutter

• Cutter diameter : Ø 250

· Applicable insert : SECN2606AFN

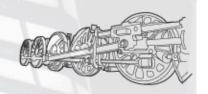
· High rake angle cutter suitable for the machining has tendency to make chatter from variety of causes.







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Application case Rail way wheel

## 2 LNUX insert for rail way wheel

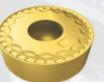
Material: SSW2, Ø 920~1000 **Cutting conditions** 

- vc=78m/min
- fn=1,0mm/rev
- ap=3~4mm



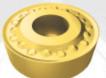
#### B chip breaker

· Comprehensive roughing design having strong edge strength with long tool life.



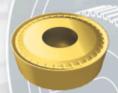
### SB chip breaker

· Better chip control at low depth of cut machining



#### SL chip breaker

- · Comprehensive chip breaker covers wide application range
- · Proper chip control with long tool life



#### TM chip breaker

· Medium-finishing chip breaker, proper surface finish, superior wear resistance



#### VT chip breake

- · Strong cutting edge for high feed and deep cutting depth
- Tough design of chip breaker provides excellent impact resistance
- SNMM type : 5 designations



### LNUX301940-TM

· Comprehensive design for general use, strong cutting edge with good chip forming. (First recommendation)



#### LNUX301940-TF

· For light cutting, it generates low cutting load, good chip forming.







Application case Edge milling

## 2 "Y"shape machining( )

- A machining to make "Y" shape on the both side—end of steel plate, to do bevel—end welding.
- Wide chip pocket on cutter provides long durability of it by reducing contact of chip with cutter body.

## 3 "I"shape machining( )

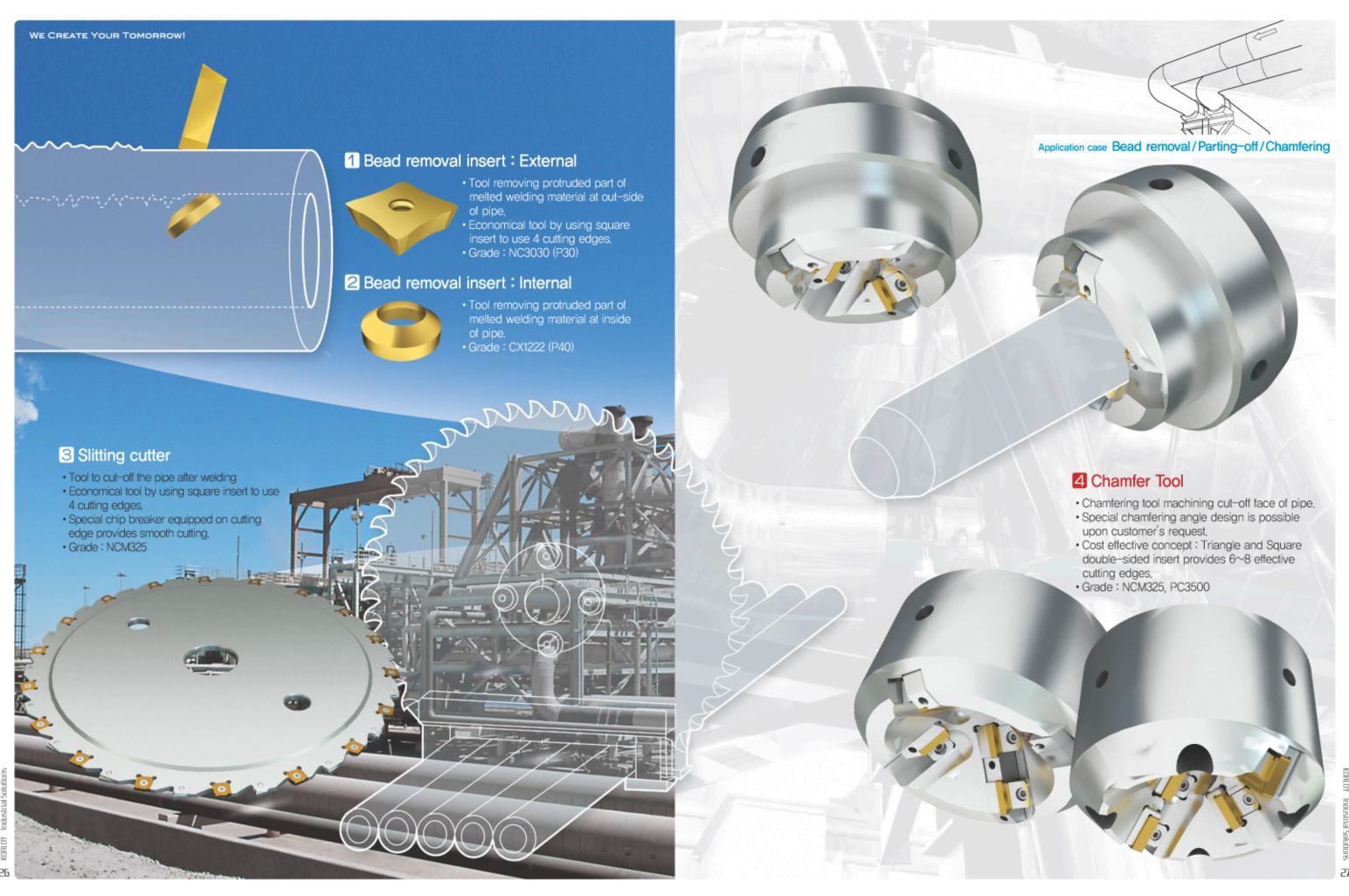
- A machining to make "I" shape on the both side—end of steel plate, to do bevel—end or plane—end welding.
- Several kinds of inserts (with chip breaker or without chip breaker) are available according to the cutting conditions.



## 4 Special machining

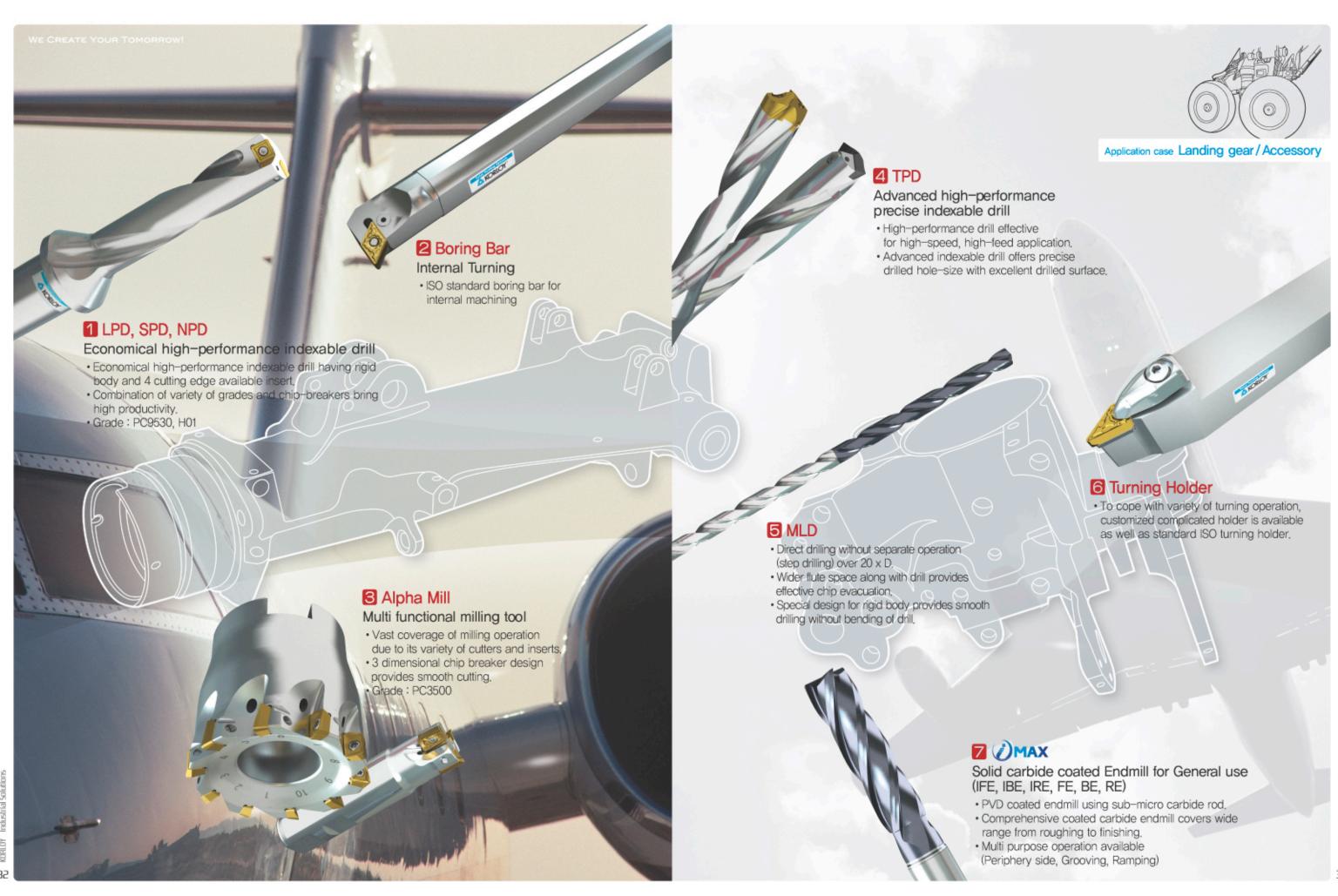
 Special design of cutter as per side—end shape of steel plant upon customer's request is available











Industrial Solutions

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# KORLOY Global Network

WE CREATE YOUR TOMORROW!

## are Korea Best, World Top 10 cemented carbide cutting tool manufacturer

KORLOY Inc. has grown to global corporation. Since the early 21st century, we have innovated our management and built up global ystem so that we are aiming Korea Best1, World Top10. As a aggressive cutting tool pioneer, KORLOY Inc. has worldwide sales network over 60 countries and supply the most advanced technology for our customers in high technology industries, KORLOY Inc. will keep doing its best and providing best quality, better services through innovation and R&D.



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