TCT CIRCULAR SAW

Cutting Tool Catalogue

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Cutting..... Leave it to us

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TAKING CUTTING INTO THE NEXT PHASE

- The mitsuki brand adopts a total approach towards cutting
- We offer know-how we have built up in a number of fields

Our mission is to deliver products that match newly developed materials and advanced cutting conditions.

- Fast cutting
- High-precision cutting
- A durable finish that withstands the test of time

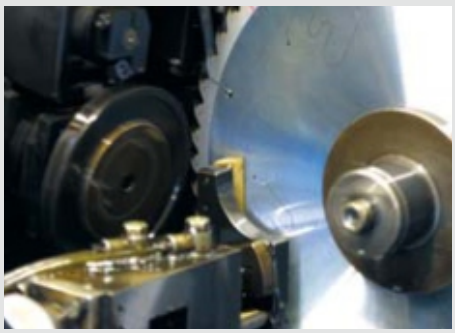
We believe that products, which combine the above performance and requirements to an advanced degree, are also saws that offer the best value in terms of the budgets of our customers.

NEEDS

- Cutting quality
- Cutting costs > Post-processing costs
- Productivity
- Environmental issues
- Automation / Labor saving

The environment surrounding cutting work

In the area of cutting work, requirements have become increasingly strict, such as diversification of materials and greater sophistication in the quality of cutting.

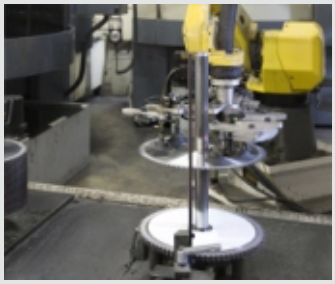


Manufacturing & Quality

With a balanced array of state-of-the-art processing machines, we are working to enhance our productivity and reduce delivery time on a daily basis. Through our test systems, we utilize equipment such as destruction testing equipment, a hardness tester, and a 3D microscope to conduct tests from multiple aspects and eliminate defective products. In addition, we own three cutting machines to conduct our products' cutting quality verification and durability tests in-house, which is one of our advantages. In our production line, each worker is strongly committed to not leaving any defects for subsequent processes. This commitment enables us to maintain and improve our quality.

製造と品質

最新鋭の加工機をバランスよく配置し、生産能力の増強と納期の短縮に日々努めています。検査体制は、破壊試験機・硬度計・3Dマイクロスコープなどを駆使し、多方面からの検査を行う事で不良品の根絶を目指しています。また、3台の切断機を有し、切断品質の確認と耐久テストも社内で実施できるのが強みです。製造現場では、各作業者が不良品を次の工程に回さない強い信念を持って取り組んでいます。その取り組みで品質の維持・向上につなげています

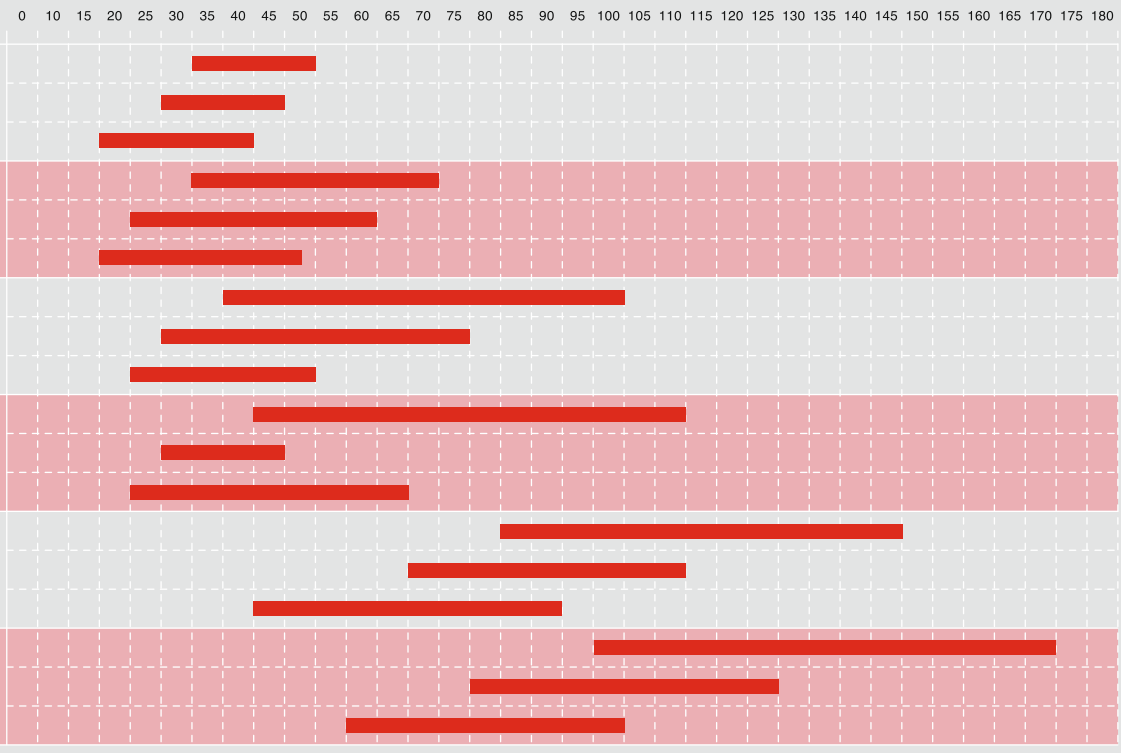


Technical Note

Metal Working

CORRESPONDENCE TABLE of diameter and number of teeth

Diameter	No. of teeth
250	54
	60
	72
285	60
	72
	80
360	60
	80
	100
420	60
	80
	100
460	40
	60
	80
580	60
	80
	100



Saw Blades for Ferrous Metals

for Heavy and Light-Duty Cutting / Throw Away Type

Materials

Structual steel, Tool steel, Alloy steel, Stainless steel, Aluminium alloy, Copper alloy

Shapes of materials

Bar steel, Bar stainless steel, Solid-drawn pipe, Deformed materials

Blade dimensions

Diameter	Kerf	Teeth
200 ~ 580	1.0 ~ 4.5	40 ~ 300

Tooth geometry

Notched breaker

Tooth material

Carbide P30, Cermet, PVD coating TiN, AlTiN, CrN

Features

Despite its thin kerf, this model boasts longevity, perpendicularity and smooth cut surface.

for Heavy-Duty Cutting

Materials

Structual steel, Tool steel, Alloy steel, Stainless steel

Shapes of materials

Bar steel, Seamless pipe, Electrowelded pipe, Bloom, Billet

Blade dimensions

Diameter	Kerf	Teeth
250 ~ 580	2.0 ~ 12.0	28 ~ 260

Tooth geometry

Trapezoidal, Noched

Tooth material

Carbide M20 · P30, PVD coating TiN, AlTiN, CrN

Cutting parameters

Steel grade	Cutting speed [m/min]	Feed rate per tooth [fz mm]
Heavy	50 ~ 90	0.05 ~ 0.08
Medium	80 ~ 120	0.08 ~ 0.15
Stainless	50 ~ 90	0.05 ~ 0.10

for Light-Duty Cutting / Automobile Industry

Materials

Structual steel, Tool steel, Alloy steel, Stainless steel

Shapes of materials

Door sash, Reinforced door beam, Exhaust pipe, Fuel pipe

Blade dimensions

Diameter	Kerf	Teeth
200 ~ 460	1.6 ~ 3.0	60 ~ 180

Tooth geometry

Flat, Trapezoidal, Chamfered flat

Tooth material

Carbide P30, Cermet

Cutting parameters

Cutting speed [m/min]	Feed rate per tooth [fz mm]
2.000 ~ 4.000	0.001 ~ 0.02

for Light-Duty Cutting

Materials

Structual steel, Tool steel, Alloy steel, Stainless steel

Shapes of materials

Solid drawn pipe, Electrowelded pipe

Blade dimensions

Diameter	Kerf	Teeth
300 ~ 630	2.0 ~ 12.0	54 ~ 260

Tooth geometry

Trapezoidal, Notched, Chamfered flat

Tooth material

Carbide P30, Cermet

Cutting parameters

Steel grade	Cutting speed [m/min]	Feed rate per tooth [fz mm]
Steel	1.000 ~ 2.000	0.05 ~ 0.10
Stainless	500 ~ 1.000	0.02 ~ 0.06

Saw Blades for Ferrous Metals

for Tube & Pipe / Throw Away Type

Materials

Steel pipe STKM11A, 12A, 13A

Shapes of materials

Thin-walled pipe, Thick-walled pipe, Seamless pipe

Blade dimensions

Diameter	Kerf	Teeth
200~630	1.7 ~ 4.0	60 ~ 200

Tooth geometry

BNCR, BNCSR, BNCV, BNCSV

Tooth material

Cermet (coating or non-coating),
Carbide (coating or non-coating)

Cutting parameters

Cutting speed [m/min]	Feed rate per tooth [fz mm]
100 ~ 200	0.01 ~ 0.03

for Coated Tipped Saw Blade.

Materials

Stainless steel, Special steel

Shapes of materials

Bar steel, Bar stainless steel

Blade dimensions

Diameter	Kerf	Teeth
250 ~ 910	1.7 ~ 4.0	60 ~ 120

Tooth geometry

BNCR, BNCSR, BNCV, BNCSV

Tooth material

Cermet (coating or non-coating),
Carbide (coating or non-coating)

Cutting parameters

Cutting speed [m/min]	Feed rate per tooth [fz mm]
60 ~ 150	0.03 ~ 0.06

Saw Blade for Mettal Cutting

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for Solid Pipes

Cermet Tipped Saw Blade.

TYPE **BS**

The side relief angle can reduce side resistance and heat generation during cutting, thus making this type most suited for cutting high-carton steels, including non-thermal refining steels, thermal refining steel. High speed cutting is also possible with the saw blade (Sz = 0.08 mm or more F=10mm/sec or more)

for Solid Pipes

Coated Tipped Saw Blade.

TYPE **BS-Ti**

Multi - layer coaded BS tipped saws with high heat conductivity can deal with the heat generated during cutting heard-to-cut materials. As cement is used as a base material, the saws are high regindable and reusable.

for Pipes

Cermet Tipped Saw Blade.

TYPE **FOR PIPE**

Employing high heat-resistant and ductile tips, these saws can prevent blade breakage due to chips caught in between the blade teeth.

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